Final Environmental Assessment
Elkhorn Slough National Estuarine Research Reserve
Boundary Change
Watsonville, California

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Office for Coastal Management
1305 East West Hwy, N/OCM
Silver Spring, MD 20910

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List of Acronyms and Abbreviations

ACOE – US Army Corps of Engineers
CAA – Clean Air Act
CAFWS – California Fish and Wildlife Service
CAPP – Conceptual Area Protection Plan
CDFW – California Department of Fish and Wildlife
CELCP – Coastal and Estuarine Land Conservation Program
CEQ – Council on Environmental Quality
CEQA – California Environmental Quality Act
CFR – Code of Federal Regulations
CWA – Clean Water Act
CZMA – Coastal Zone Management Act
EA – Environmental Assessment
ECOS – Environmental Conservation Online System
EFH – Essential Fish Habitat
EPA – Environmental Protection Agency
ESA – Endangered Species Act
ESF – Elkhorn Slough Foundation
ESNERR – Elkhorn Slough National Estuarine Research Reserve
FEIS – Final Environmental Impact Statement
LCP – Local Coastal Planning
MMPA – Marine Mammal Protection Act
MOU – Memorandum of Understanding
NAAQS – National Ambient Air Quality Standards
NEPA – National Environmental Policy Act
NERRS – National Estuarine Research Reserve System
NHPA – National Historic Preservation Act
NMFS – National Marine Fisheries Service
NOAA – National Oceanic and Atmospheric Administration
NOS – National Ocean Service
OCM – Office for Coastal Management
SHPO – State Historic Preservation Office
SWMP – System-wide Monitoring Program
TWP – Tidal Wetland Project
USACE – United States Army Corps of Engineers
USFWS – United States Fish and Wildlife Service
WCB – Wildlife Conservation Board

Chapter 1 INTRODUCTION AND BACKGROUND

The Elkhorn Slough National Estuarine Research Reserve (Reserve or ESNERR) is a component of the National Estuarine Research Reserve System (NERRS), a federal-state partnership of protected research and education sites administered by the NOAA, as authorized under Section 315 of the Coastal Zone Management Act (CZMA) (16 U.S.C. § 1461). Pursuant to 15 C.F.R. §§ 921.13, 921.33, the Elkhorn Slough NERR has a NOAA-approved management plan that is to be updated every five years.

The National Oceanic and Atmospheric Administration (NOAA) designated the ESNERR in 1979 in an area located adjacent to Monterey Bay in California. The land parcels comprising the Reserve are owned and managed by the California Department of Fish and Wildlife (CDFW) and are cooperatively managed by NOAA, CDFW, and the California State Coastal Conservancy (Conservancy), as described below. CDFW operates the Reserve in partnership with NOAA, as well as the local non-profit, Elkhorn Slough Foundation (ESF or Foundation). NOAA, CDFW, and the Conservancy operate under a Memorandum of Understanding through which the CDFW manages operations of the Reserve, and the Conservancy serves as fiscal agent, on behalf of CDFW, for NOAA's funding. The Conservancy sub-awards funds to ESF to support Reserve staff and programs. At the State level, the Reserve is administered through CDFW's Central Regional Office (Region 4) located in Fresno, California. CDFW maintains native fish, wildlife, plant species and natural communities for their intrinsic and ecological value and their benefits to people. This includes habitat protection, maintenance, and quality to ensure the survival of all species and natural communities. The CDFW also is responsible for managing diversified use of fish and wildlife including recreational, commercial, scientific and educational uses.

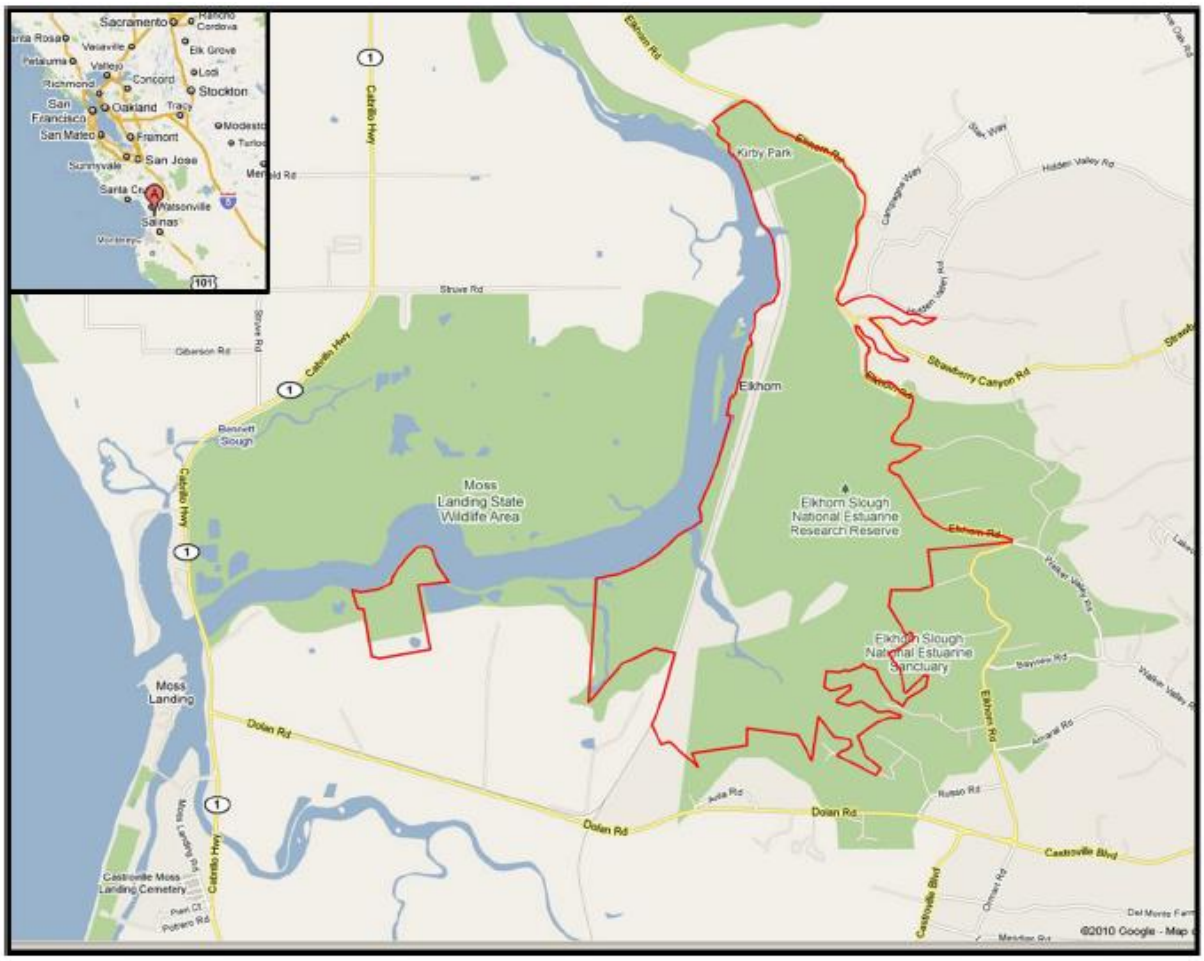

Figure 1.1: Elkhorn Slough National Estuarine Research Reserve
**red line denotes current boundary of NERR*

The Elkhorn Slough contains significant amounts of salt marsh vegetation, which transitions to coast live oak woodlands, coastal scrub and coastal grasslands on a relatively steep slope. These varied habitats situated next to Monterey Bay combine to create opportunities for great diversity of plants and animals. Elkhorn Slough hosts a remarkable diversity of wildlife, including southern sea otters, harbor seals, over 340 species of birds, 100 species of fish, and 550 marine invertebrate species. The surrounding uplands are home to stands of maritime chaparral, which are protected as environmentally sensitive habitat under the California Coastal Act and under Monterey County's Local Coastal Plan. Coastal prairie and northern coastal scrub are part of a complex and dynamic mosaic of upland habitats within the Elkhorn Slough watershed. Coast live oak (*Quercus agrifolia*) woodland is common in the Elkhorn Slough watershed and is often found growing on 15 to 50 percent slopes and loamy sands in the hills east of the ESNERR. However, in estuarine habitats of the ESNERR, numerous contaminants have been identified from a variety of human uses such as industry, agriculture, and residential development. In this largely rural watershed, the main cause of water and sediment quality degradation appears to be from agricultural non-point source pollution.

The Reserve operates a number of system-wide and Reserve-specific programs to carry out its objectives, including management-related research, estuarine education, coastal training, land stewardship (including habitat restoration), and volunteer programs. The Reserve protects, enhances, and restores tidal wetland, freshwater, grassland, scrub and oak woodland habitat within its boundaries. It utilizes a science-based approach to land management, and engages the public through volunteer and outreach events.

In order to reduce pollution across the Elkhorn Slough Watershed, the Reserve improves understanding of pollution levels, sources, and effects on coastal habitats, generates and disseminates information on estuarine values , and undertakes management activities to decrease effects of agricultural run-off and erosion on the Reserve affect them. The Reserve also is committed to monitoring the key indicators of ecosystem health in the watershed. The Reserve community collects, archives, and disseminates consistent, high caliber data on critical ecosystem characteristics. In order to educate the community about the watershed and inspire them to consider environmental conservation when making decisions affecting Elkhorn Slough and its watershed, the Reserve creates and implements environmental education programs for school-aged children, visitors, and decision makers.

1.1 Historical Context for Boundary Change

When NOAA designated the "Elkhorn Slough Estuarine Sanctuary" (now "Elkhorn Slough National Estuarine Research Reserve") in 1979, the original acquisition boundary included *"areas of importance to the formation of an estuarine sanctuary, all wetlands to the mean high tides, as well as some adjacent uplands, comprising habitat lands important to wildlife and/or lands suitable for sanctuary support facilities."* (FEIS 1979). The FEIS also stated, *"Ownership or comparable control by the State would fully ensure that the areas within the boundaries would be managed to meet sanctuary objectives."*

Since that time, the Reserve has acquired numerous parcels within the original acquisition boundary identified in the 1979 FEIS, and as described in the 1985 and 2007 updates of the Elkhorn Slough Reserve Management Plan. From 1985 to 1990, CDFW acquired four additional parcels totaling 137 acres, which were added to the Reserve in 2007, bringing the size of the Reserve to approximately 1,380 acres. Between 2007 and 2012, the CDFW acquired eight additional parcels, consistent with the acquisition priorities identified when the Reserve was designated in 1979, and one additional parcel along Moro Cojo slough. As discussed below, the proposed action is NOAA's approval of the Reserve's boundary change reflecting an expansion of nine additional parcels and the removal of a 13.98-acre agricultural use area. Following the conclusion of the boundary change process, the Reserve anticipates incorporating the nine parcels and removal of one parcel of state-owned land into their next update of the Reserve's Management Plan, which NOAA will review as a separate action.

Land acquisition for ESNERR is guided by the approved 2002 CDFW Elkhorn Slough Conceptual Area Protection Plan (CAPP), developed by the Reserve Manager with input from ESF. The CAPP focuses on critical lands and habitat either adjacent to or nearby ESNERR. The CAPP is designed to focus on the watershed lands having the greatest impacts, positive or negative, on Elkhorn Slough.

The Howell, Springer, Wells, Jazwin and portions of the Minhoto parcel were identified within the original boundary for the Reserve's designation within the 1979 FEIS. Alternatives considered in the 1979 FEIS included expansion of the proposed boundaries and the tightening of boundaries. The 1979 FEIS determined that expansion of the proposed boundaries to include acquisition of these and other buffer parcels was not feasible at that time because sufficient funds were not available for all lands originally proposed. The FEIS also noted that some of the parcels were subject to existing or proposed regulatory protections from other agencies, including the U.S. Fish and Wildlife Service.

1.2 The National Estuarine Research Reserve System

The Coastal Zone Management Act (CZMA) is the guiding legislation for the ESNERR, 16 U.S.C. § 1451 et seq. This Act, administered by NOAA's Office for Coastal Management, provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." 16 U.S.C. § 1452. The CZMA outlines three national programs, the National Coastal Zone Management Program, the National Estuarine Research Reserve System, and the Coastal and Estuarine Land Conservation Program (CELCP). The National Coastal Zone Management Program aims to balance competing land and water issues through state and territorial coastal management programs. The Reserves serve as field laboratories that provide a greater understanding of estuaries and how humans affect them. CELCP provides matching funds to state and local governments to purchase threatened coastal and estuarine lands or obtain conservation easements (OCM 2017).

Representative of the various biogeographic regions and estuarine types in the US, the National Estuarine Research Reserve System is a network of 29 coastal sites designated to protect and study estuarine systems. Established through CZMA to complement the National Coastal Zone Management Program, which is dedicated to comprehensive, sustainable management of the nation's coasts, the reserves represent a partnership program between NOAA and the coastal states. NOAA provides funding and

national guidance, and a lead state agency or university with input from local partners manages each site. Figure 1.2 provides a map of current reserves.

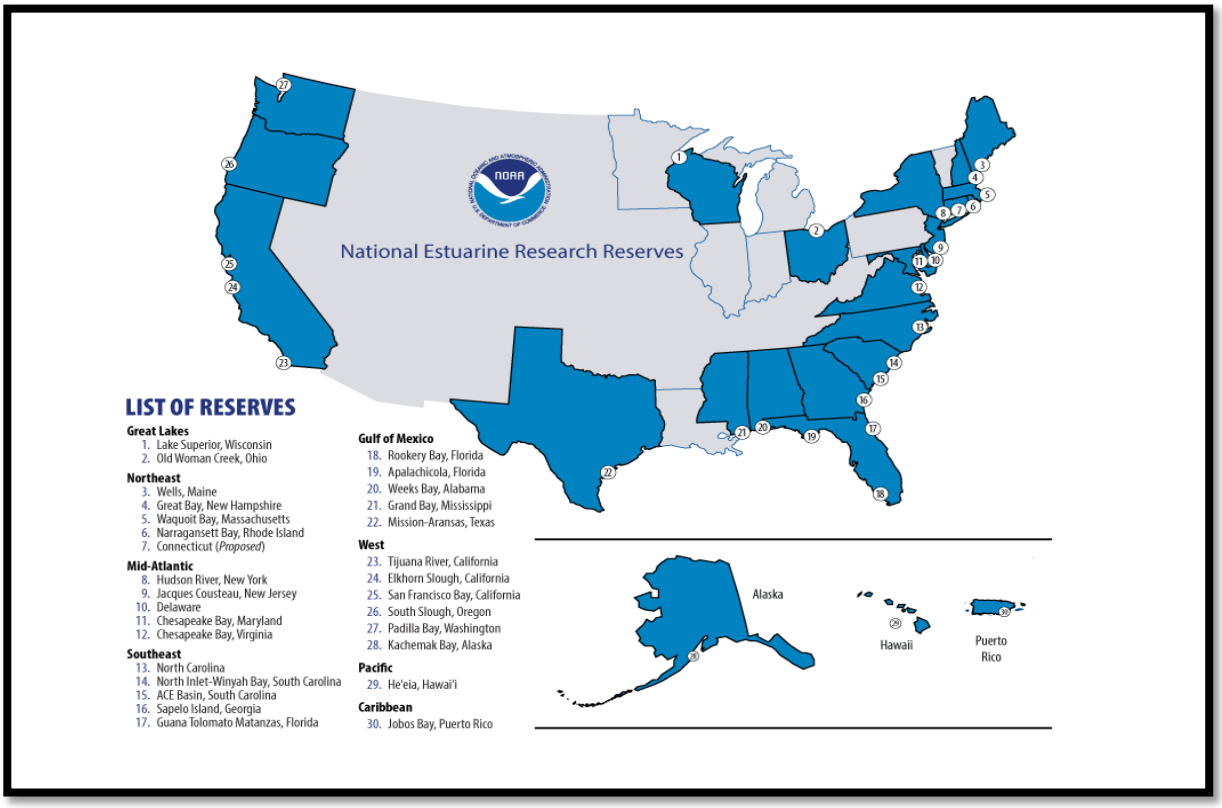

Figure 1.2: Map of the National Estuarine Research Reserves (designated and proposed)

The research reserves cover over 1.3 million acres of estuaries and are focused on the following:

- **Stewardship** - Each site undertakes the initiatives needed to keep the estuary healthy.

- **Research** - Reserve-based research and monitoring data are used to aid conservation and management efforts on local and national levels.

- **Training** - Local and state officials are better equipped to introduce local data into the decision-making process as a result of reserve training efforts.

- **Education** - Thousands of children and adults are served through hands-on laboratory and field-based experiences. School curriculums are provided online.

OCM encourages public awareness of coastal resources and best methods to address storm preparedness, erosion, development, habitat loss, sea level rise, public access, and threats to water quality. As a scientific organization, NOAA provides access to the science and environmental intelligence communities need for these tasks.

CZMA implementing regulations (15 C.F.R. § 921.30) specify that NOAA may designate an area as a NERR if the Governor of the state in which the area is located proposes the area for designation and NOAA makes the following findings:

> "(1) The area is a representative estuarine ecosystem that is suitable for long-term research and contributes to the biogeographical and typological balance of the System;
>
> (2) Key land and water areas of the proposed Reserve, as identified in the management plan, are under adequate state control sufficient to provide long-term protection for reserve resources to ensure a stable environment for research;
>
> (3) Designation of the area as a Reserve will serve to enhance public awareness and understanding of estuarine areas, and provide suitable opportunities for public education and interpretation;
>
> (4) A final management plan has been approved by NOAA;
>
> (5) An MOU has been signed between the state and NOAA ensuring a long-term commitment by the state to the effective operation and implementation of the area as a National Estuarine Research Reserve;
>
> (6) All MOU's necessary for reserve management (i.e., with relevant Federal, state, and local agencies and/or private organizations) have been signed; and
>
> (7) The coastal state in which the area is located has complied with the requirements of [Site Selection, Post Site Selection and Management Plan Development]."

NOAA must also determine whether the designation of a Reserve in a state with a federally-approved coastal zone management program directly affects the coastal zone, and if so, determine whether the designation is consistent with the State's program.

Under 15 C.F.R. § 921.33, changes in the boundary of a Reserve and major changes to the final management plan, including state laws or regulations promulgated specifically for the Reserve, may be made only after written approval by NOAA. NOAA issued a public notice, including placing a notice of availability of the draft EA in the Federal Register on October 28, 2019 (84 FR 57702), and provided an opportunity for public comment before approving the revised boundary. One comment was received from the USEPA - Region 9 office, supporting the action; as such, no edits addressing the public comment and no responses to comments are necessary.

1.3 The Elkhorn Slough Region

The Elkhorn Slough is an estuary located approximately 100 miles south of San Francisco in northern Monterey County, California. It is one of the largest remaining estuaries in California, consisting of 1,439 acres. The mouth of the Slough is in the town of Moss Landing, midway between Santa Cruz and

Monterey. The main channel of the slough is designated as part of the Monterey Bay National Marine Sanctuary.

Surrounding Elkhorn Slough are the lowlands of the lower Salinas Valley, hilly uplands and marine terraces that lie between the Pajaro and Salinas Valleys in Monterey and San Benito Counties. The slough flows under state Highway 1 into Moss Landing Harbor, a manmade small craft harbor that supports a fishing fleet, recreational craft, and research vessels. The tidally restricted Moro Cojo and Tembladero estuaries also empty into the Moss Landing Harbor from the south. Monterey Bay and its surrounding waters make up the 13,700 square kilometer Monterey Bay National Marine Sanctuary, another program administered by NOAA.

Located near Moss Landing Harbor are marine-related businesses and two marine research organizations, the Monterey Bay Aquarium Research Institute and Moss Landing Marine Laboratories. A power plant owned by Dynegy lies directly inland from the harbor. Public agencies and private conservation groups protect several areas surrounding Elkhorn Slough. Public access to the Slough is available through Kirby Park, which is maintained through the Moss Landing Harbor District. However, this particular entrance driveway was damaged by an agricultural runoff through a culvert under the driveway, and the driveway has been locked since 2017. Additional wildlife areas include 588.11 acres in the upper slough owned originally by The Nature Conservancy and now owned by ESF, and the 640 acres Moss Landing Wildlife Area on the sloughs north side, managed by the CDFW. The Elkhorn Slough Foundation is a local land trust actively working on the slough. The ESF acquires land for conservation and owns more than 1,482.63 acres in the watershed (Site Profile 2002).

1.4 Summary of Proposed Action

Under the proposed action, NOAA would approve of the addition of nine parcels to the existing management boundary of the ESNERR and the removal from the existing boundary of a 13.98-acre portion of land that contains a non-conforming use. 15 C.F.R. § 921.33(a). The nine new parcels, acquired since 2007, are all owned by the State of California, eight of which are adjacent to the Reserve's current management boundary and the ninth is within the watershed (Moro Cojo). Five of the nine parcels were included in the Reserve's original acquisition boundary per the 1979 FEIS: Howell, Springer, Wells, Jazwin and portions of Minhoto. The others (Garcia, Howell Life Estate, Tabor-Beck, upland portions of Minhoto, and Moro Cojo) were not included in the original boundary. These ESNERR-targeted properties are not large in acreage, but they are important in terms of protected wetlands, buffers, or access to Reserve lands.

The CDFW and NOAA now propose for these adjacent parcels to be incorporated into the Reserve's management boundary through a formal boundary expansion, and to remove a 13.98-acre area from the existing Reserve boundary. This formal expansion of the Reserve would benefit the Reserve by allowing additional lands to be managed by as part of the Reserve, as well as serve as buffers to protect the existing core Reserve lands.

A parcel is considered for protection based on its proximity to the existing Reserve, the habitat values present on the property, and the land use occurring on the parcel. Priority is given to properties that were

identified as part of the Reserve's original acquisition boundary at the time of designation. No properties are pursued for protection without the complete cooperation of the landowner. The ESF often assists in the acquisition of new lands. Sometimes the Foundation acquires and holds a property as an intermediate step towards public ownership. The parcels to be added to the Elkhorn Slough Reserve boundary are shown on the map in Figure 1.3 and described below.

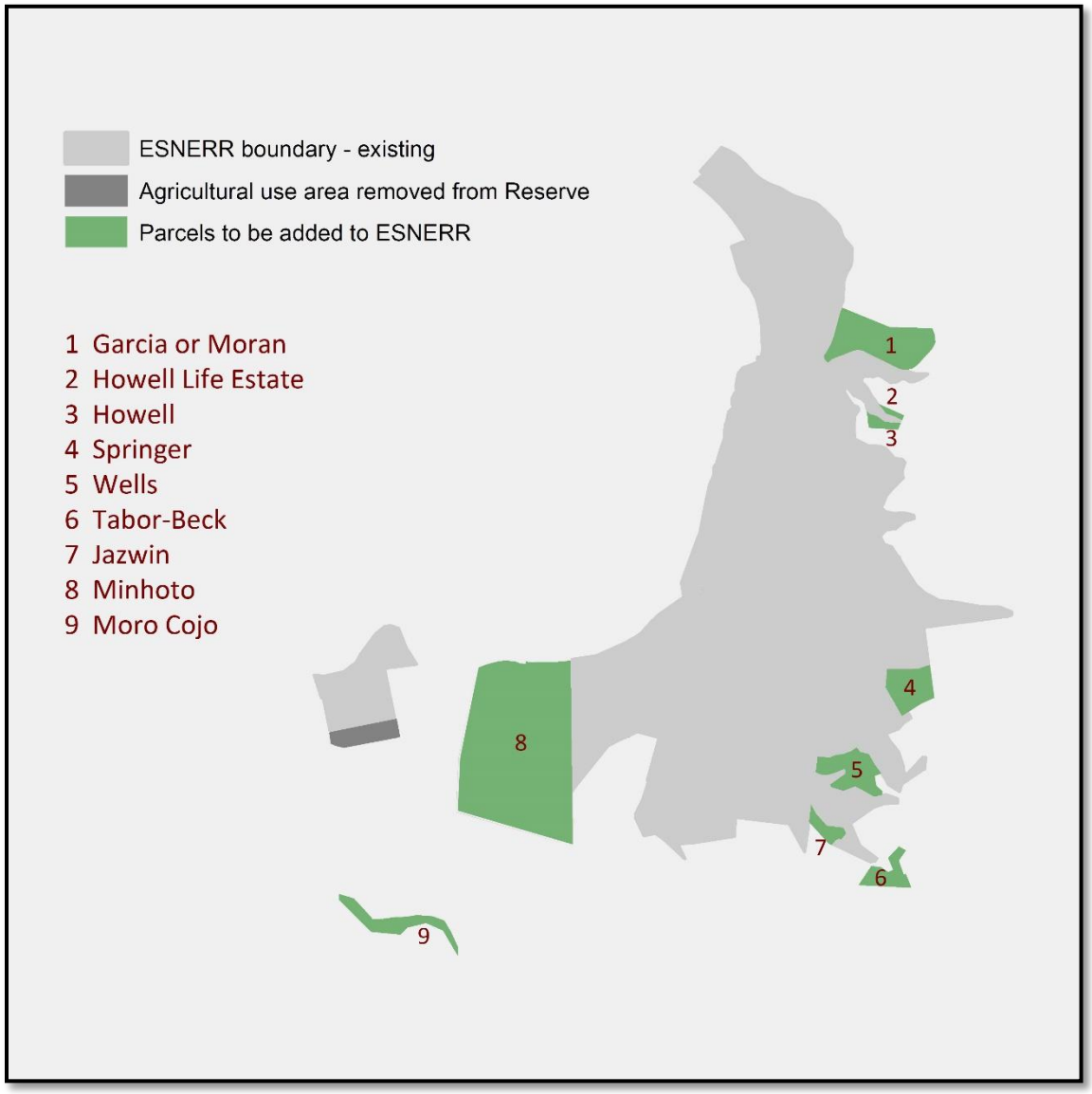

Figure 1.3: Map of Elkhorn Slough NERR Expansion Parcels (green) relative to Current Boundary

1) Garcia Property *(41.919 acres)*

The 42-acre Garcia property, also known as the Moran parcel or Elkhorn Slough Ecological Reserve Expansion 12, is a key upland property in the Elkhorn Slough watershed. It is adjacent to the existing Reserve boundary and contains a mixture of coast live oak woodland, coastal scrub, grassland, an acre of maritime chaparral (the only stand on the ESER) and former farmland. This property is intended to be used as brackish wetland buffer and managed for natural habitat. Incorporating this property will prevent

it from being developed into residential housing and thereby prevent erosion of sediment, chemicals, and nutrients into adjacent ESNERR wetlands. Habitat restoration on this property will further improve water quality draining into these wetlands. The Reserve plans to protect 1 acre of maritime chaparral on this parcel through weed abatement and maintenance of previous restoration plantings.

CDFW acquired this property in 2008 with funding from NOAA's NERRS Acquisition and Construction program, as well as $535,000 of funding from California's State Wildlife Conservation Board (WCB) as the state's matching contribution. The WCB approved funding for the acquisition of this property at their meeting on August 23, 2007. The fee acquisition of this property was the most appropriate acquisition method because the sellers were interested in only a fee interest sale for the entire parcel at the appraised value. In addition, extensive habitat restoration of the farm fields made a conservation easement inappropriate. Acquisition of this parcel received a categorical exemption, also called "Notice of Exemption", under Article 19 of the California Environmental Quality Act (CEQA) because it involves the acquisition of land for wildlife conservation purposes and the transfer of ownership of interest in land to preserve open space.

2) Howell Life Estate *(1.84 acres)*

CDFW acquired the Howell Life Estate, a 1± acre parcel of land also known as the Elkhorn Slough Ecological Reserve expansion 18, from the Elkhorn Slough Foundation, as an addition to the Reserve for the protection of critical tidal wetlands and grassland habitat. The parcel is valuable as part of the overall Elkhorn Slough ecosystem – it is adjacent to the waters of the slough and lies between the slough and other property owned by the CDFW.

The property is contiguous to two other parcels acquired from the original owner. The Foundation initially purchased the property at a time when the state, due to a fiscal crisis, was unable to acquire the property directly. The Foundation was able to purchase this remaining parcel in the interim to ensure its protection. As a condition of sale, the original landowner wanted to remain on the property. In order to accommodate his request, the Foundation negotiated a life estate which was considered when the property was appraised. The property was acquired subject to the life estate. The Foundation sold the property to CDFW for the appraised fair market value, as approved by the Department of General Services, in the year 2010.

Acquisition of this parcel was categorically exempt from the CEQA under Section 15313, Class 13, as the acquisition of lands for fish and wildlife conservation purposes and under Section 15325, Class 25, as a transfer of an ownership interest in land to preserve open space. The appropriate Notice of Exemption was filed with the State Clearinghouse after approval by the WCB.

3) Howell Property *(3.487 acres)*

CDFW purchased the Howell property, also known as the Elkhorn Slough Ecological Reserve Expansion 10 in 2007. The 3.89-acre Howell property is directly adjacent to the Slough wetlands and contains upland habitat and dry lowlands. The property comprises a eucalyptus stand and oak woodlands with restoration potential. The property was acquired in fee title with funding from NOAA's Coastal and Estuarine Land Conservation Program (CELCP) program. Through the CELCP, acquisition of this property protects an important coastal and estuarine area that has significant conservation, passive

recreation, ecological, and aesthetic values and that is threatened by conversion from its natural or recreational state to other uses. California's WCB, the source of state matching funds, approved funding for the acquisition on August 17, 2006.

The property provides an important buffer between the wetlands and any future development in the Slough. No restoration is currently planned at this time but may be considered in the future. The property was purchased primarily for the biological values found on the property. In the future, it is possible that public access may be allowed to the lowland part of the property for passive recreational opportunities while protecting the biological resources on the property.

This parcel was identified in the Reserve's 1979 FEIS under "Boundaries and Acquisition of Land." Also, in 2006, acquisition of this parcel received an Article 19 categorical exemption under CEQA because it involves the acquisition of land for wildlife conservation purposes and the transfer of ownership of interest in land to preserve open space. There are no known significant historical features on the property. A report from the California State Office of Historic Preservation confirms this.

The property is directly adjacent to the wetlands of the Elkhorn Slough and the Reserve would maintain the property in its natural state. The property is visible from many vantage points in the Slough and, when connected to other acquisitions, will provide a continuous, natural landscape for the kayakers and hikers in the Slough to enjoy.

Howell property is adjacent to the Reserve's existing protected lands. Acquisition of this property helped create an intact and interconnected network of natural communities and tidal marshlands in the Elkhorn Slough. Biological resources found on the property provide critical habitat for a number of sensitive species. Its incorporation into the Reserve would also protect the property's wetlands from development and safeguards the Slough's water quality by reducing potential pollution.

4) Springer *(18.407 acres)*

The Springer parcel, also known as Elkhorn Slough Ecological Reserve Expansion 15, was purchased in 2007 and is approximately 18 acres. The property was acquired with funding from NOAA's NERRS Acquisition and Construction program, as well as funding from California's State WCB as the state's matching contribution. A Notice of Exemption was filed with the State Clearinghouse upon approval by the WCB.

This property is also adjacent to the Reserve's existing protected lands. Incorporation of this property into the Reserve would help create an intact and interconnected network of natural communities and tidal marshlands in the Elkhorn Slough. Upon acquisition, CDFW removed row crops from the land, and is currently restoring oak savanna on one of its slopes. Biological resources found on the property provide critical habitat for several sensitive species (table 4.1). By prohibiting development on the property, the wetlands downslope of the property would be protected, and the water quality of the Elkhorn Slough would be protected from possible pollution and include removal of decaying buildings.

This parcel would also be part of the Reserve's grazing research project, which includes three grazed pastures and three un-grazed controls. The research is designed to test the effectiveness of grazing on

restoring native grassland assemblages that are sometimes displaced by very tall exotic weeds that can dominate grasslands in the absence of disturbances.

5) Wells *(21.369 acres)*

The 21-acre Wells parcel, also known as the Elkhorn Slough Ecological Reserve Expansion 9, was purchased in 2007 and is located near the town of Elkhorn and Castroville. The property was acquired in fee title with funding from NOAA's Coastal and Estuarine Land Conservation Program (CELCP) program. The state share of funding for this project was approved by the WCB on August 17, 2006, using bond funds approved by the voters for the protection of conservation resources.

The Wells property is directly uphill of Slough wetlands and contains upland habitat. Acquisition of this property protected an important coastal and estuarine area that has significant conservation, ecological, and aesthetic values and that is threatened by conversion from its natural or recreational state to other uses. The property provides an important buffer between the wetlands and any future development in the Slough. The property also protects critical habitat necessary to maintain the ecological balance of the Slough.

The property contains approximately 16.5 acres of grasslands and approximately 3.5 acres of eucalyptus. The eucalyptus on this property would not be subject to the Reserve's ongoing eucalyptus removal project, but Pacific Gas & Electric would likely remove some eucalyptus on the property as routine maintenance of their utility right-of-way. This parcel would also be part of the Reserve's grazing research project, which includes three grazed pastures and three un-grazed controls. The research is designed to test the effectiveness of grazing on restoring native grassland assemblages that are sometimes displaced by very tall exotic weeds that can dominate grasslands in the absence of disturbances.

The primary purpose of this acquisition is to protect the biological resources but limited public access may be allowed in the future. The Wells property is directly uphill from the wetlands of the Elkhorn Slough and would be maintained in its natural state. The property is visible from many vantage points in the Slough and, when connected to other acquisitions, would provide a continuous, natural landscape for the kayakers and hikers in the Slough. This particular property does not directly impact a nationally designated scenic byway or trail.

Upland habitat including grassland, and eucalyptus woodlands, are found on the subject property that is uphill of wetlands of the Slough. Potential uses of the property may include nature study and scientific research. Also, this acquisition fills a gap as the property has been inholding, and now two separate Reserve parcels would be connected, creating connectivity between fingers of the Slough and the adjacent uplands.

This parcel was identified in the Reserve's 1979 FEIS under "Boundaries and Acquisition of Land." Also, acquisition of the parcel was reviewed under CEQA. A Notice of Exemption was filed with the State Clearinghouse after approval by the WCB.

This property is adjacent to the Reserve's existing protected lands. Incorporating this property into the Reserve would help create an intact and interconnected network of natural communities and tidal

marshlands in the Elkhorn Slough. Biological resources found on the property provide critical habitat for several sensitive species (table 4.1). By prohibiting development on the property, the property wetlands would be protected, and the water quality of the Elkhorn Slough would be protected from possible pollution.

6) Tabor-Beck *(10.86 acres)*

CDFW purchased the 11-acre Tabor-Beck parcel, also known as the Elkhorn Slough Ecological Reserve Expansion 11, in 2008 to incorporate into the Elkhorn Slough NERR. This parcel has a mixture of coast live oak woodland and grassland along a swale uphill from an ESNERR tidal wetland. It is undeveloped and has a history of row-crop cultivation and more recently cattle grazing. This property is intended to be used as tidal wetland buffer and managed for natural habitat. Incorporation of this property would prevent it from being developed into residential housing and almost eliminate soil erosion into wetlands. After acquisition, Reserve staff and volunteers removed trash and interior barbed wire fences to improve the habitat value of the land.

The State WCB approved funding of $232,500 as a required match for the acquisition of this property. A CEQA Notice of Exemption was filed with the State Clearinghouse after approval by the WCB.

7) Jazwin *(6.451 acres)*

In March 2008, CDFW purchased the six acres of Jazwin parcel, also known as the Elkhorn Slough Ecological Reserve Expansion 16, as an addition to the Elkhorn Slough Ecological Reserve for the preservation and protection of wildlife habitat. The parcel contains grasslands and oak woodlands that are valuable as part of the overall Elkhorn Slough ecosystem. In addition to the wildlife value contained within this parcel and the fish and wildlife values of the adjoining slough, the property offers potential for such uses as nature study and scientific research but does not present a realistic avenue for public access due to its location, and terrain. The CDFW currently manages the Reserve and the property would be incorporated in the Reserve for management purposes.

This parcel was identified in the Reserve's 1979 FEIS under "Boundaries and Acquisition of Land." California's WCB approved funding for this acquisition on November 15, 2007. Also, acquisition of this parcel received a categorical exemption under CEQA because it involves the acquisition of land for wildlife conservation purposes and the transfer of ownership of interest in land to preserve open space.

8) Minhoto *(193 acres)*

In 2009, CDFW purchased the Minhoto parcel, also known as the Elkhorn Slough Ecological Reserve Expansion 17, which is approximately 208 acres. The property was acquired with a combination of federal funding from NOAA's NERRS Acquisition and Construction program, the U.S. Land and Water Conservation Fund, and state funding from California's WCB as a required match.

The Minhoto property is adjacent to the Reserve's current management boundary and was identified for future acquisition at the time of the Reserve's designation in 1979. This parcel contains 68 acres of saltwater wetland which is directly connected to the main channel of Elkhorn Slough, and about 140 acres of former farmland that will serve as a buffer to the tidal marsh; fifteen of the acres are submerged lands and are not being proposed for inclusion in the Reserve's management boundary This property was

intended to be used as tidal wetland and salt-marsh buffer and managed for natural habitat in the long run. It is now undergoing a significant restoration that is restoring formerly drowned salt marsh and enhancing particularly vulnerable, low elevation marsh, raising it to an elevation that can withstand rising sea levels. The habitat restoration will improve water quality draining into these wetlands. In the past, the property's uplands were in agricultural production for cultivation of cut flowers as row crops. Through the property's restoration, some uplands are being planted with native grasses, which will restore native habitat and will provide a vegetated buffer between uplands and wetlands. Along with the Moro Cojo parcel, the Minhoto parcel would be the most likely to see future recreational opportunities and public access.

This parcel was identified in the Reserve's 1979 FEIS under "Boundaries and Acquisition of Land." The State WCB approved funding for acquisition of this property on February 20, 2008. Acquisition of this parcel was reviewed and received a categorical exemption under CEQA because it involves the acquisition of land for wildlife conservation purposes and the transfer of ownership of interest in land to preserve open space. The restoration of this parcel was the subject of extensive analysis during CEQA review, as well as permitting for the restoration project. These reviews resulted in a "Mitigated Negative Determination" for the project under CEQA and approval of the required Federal and state permits. Construction of the restoration project began in January 2018.

9) Moro Cojo *(16.42 acres)*

In October 2016, CDFW purchased the Moro Cojo parcel, also known as the Elkhorn Slough Ecological Reserve Expansion 18, which is approximately 16.42 acres. Moro Cojo is part of the interconnected estuary that includes Elkhorn Slough to the north, the Old Salinas River Channel (OSRC) to the west, and the Tembladero Slough to the south. The parcel has a mix of muted tidal channel, tidal marsh, ecotone, restored oak woodland, scrub and grasslands. This parcel would be the Reserve's first property to include the larger estuarine area; hydrologically connected to Elkhorn Slough through OSRC, and connected to Minhoto parcel through historic swale. The site provides the Reserve permanent access to Moro Cojo to continue its long term monitoring in that part of the larger estuarine system.

The main channel of Moro Cojo was first muted in the 1880s for the purpose of preventing "the tides from submerging a large tract of salt marsh, tide lands lying between Moss Landing and Castroville" (Pacific Rural Press November 8, 1884). Wetlands behind the water control structure were "reclaimed" for agriculture – crops and grazing land. The water control structures remain in place, but land acquisition by the Foundation in lower Moro Cojo has set aside these muted wetlands for conservation and protection. CDFW's Moro Cojo parcel was previously owned as part of a dairy operation; it was fenced off from grazing in the early 2000s, and the fenced slope and Central Coast Wetlands Group planted tidal wetlands with native species between 2002 and 2008. Today native coastal plant assemblages dominate the slope.

The Wildlife Conservation Board considered the land exchange at its August 2016 meeting . A CEQA notice of exemption was granted because the transfer of ownership for the purpose of preserving open space.

Seal Bend - Removal of 13.98-acres

When CDFW (then known as California Department of Fish and Game) purchased the Seal Bend property in 1982, a portion of the property within the Reserve's buffer area was under lease for use as a feedlot. The property was included in the Reserve boundary with the understanding that this use would be phased out after the lease expired. Rather than displace this use, however, the CDFW decided instead to dispose of that portion of the property. In 2015, CDFW transferred the 13.98-acre portion of the Seal Bend parcel to the former leaseholder in exchange for another 16.42-acre parcel (Moro Cojo). CDFW no longer owns or maintains state control over that portion of the property, and therefore, it is proposed for removal from the Reserve's boundary.

Chapter 2 PURPOSE AND NEED

2.1 Purpose

The proposed action would expand, as appropriate, the network of protected areas within the Reserve (i.e., those areas in which existing Reserve regulations and management actions would apply). The purpose of the proposed action is to further the CZMA purposes and policies by implementing the NERR programs and plans on appropriate habitat parcels available for inclusion. The purpose of the proposed action also is to further the NERR mission to identify, protect, conserve, and enhance the natural and cultural resources, values, and qualities of NERR sites and its regional environment for this and future generations. Incorporating additional parcels near the Reserve would provide continuity in science-based management of the Reserve's coastal resources that is compatible with its purpose to:

1. Increase opportunities for long-term scientific research and environmental education.

2. Provide a scientific research and monitoring program, which is responsive to the resource management needs of the cooperators for ultimate improvement of the management of this coastal ecosystem.

3. Enhance public awareness and understanding of the estuarine environment through the implementation of environmental education programs in the local public schools and the nearby communities, and by conducting on-site interpretation of the natural and cultural resources within the Reserve.

4. Promote local, state, and federal government cooperation in the management of the Reserve.

2.2 Need

The goal of the ESNERR is to provide a natural laboratory for the study of estuarine ecological relationships. The proposed action would:

1. Formally incorporate parcels that were identified for acquisition at the time of the Reserve's designation and bring the boundary closer to that originally envisioned for the Reserve;
2. Add adjacent parcels as buffers to better protect core areas within the current ESNERR boundary, further its research and stewardship mission, and provide additional lands/uses for public use; and
3. Remove a non-conforming use associated with Seal Bend property (i.e., a feedlot), from the Reserve's current management boundary.

Cooperation of the landowners and Moss Landing Harbor District has allowed educational and scientific use of the Reserve. However, the proposed action -- incorporation of the additional land into the Reserve's boundaries – is necessary to address the following Reserve needs:

1. To provide ultimate management control within the Reserve, not only at present, but in years to come when land ownership and land uses may change to the point of altering the present natural resource values of the area;
2. To ensure a continuum of the baseline research without unregulated access;
3. To acquire lands suitable for interpretive and support facilities; and
4. As access sites to meet the goals and objectives of research/educational programs for the estuarine area as a whole.

The proposed boundary change would extend the comprehensive conservation and management capacities authorized by NOAA for the land in the existing NERR boundary to new areas, providing a mechanism for implementation of specific restoration, monitoring, and research activities for important estuarine resources. The incorporation of places of national significance into the NERR will support national ocean resource management objectives articulated by many publicly vetted and expert-driven strategic planning efforts under the administration of NOAA. At the same time, the opportunities for research, exploration, and education related to these significant ocean resources are critical for understanding changes occurring in the environment and the ecosystem services these resources provide for communities throughout this region. Therefore, a comprehensive management approach offered by NOAA approval is needed for the additional parcels acquired by CDFW, and the ESNERR is uniquely positioned to provide a coordinated conservation program to protect the additional ecologically vital areas in its vicinity.

Currently, the Reserve includes 36 individual assessor parcels (28 different ownerships). Of this, acquisition of uplands above the 10’ contour has already taken place from most ownerships. Most of these locations provide access for volunteers, staff performing monitoring, and research, and most of the parcels provide public access and use areas. The remaining parcels include areas below the 10’ contour line. This line was determined in previous scientific studies to be the line below which public acquisition and control was essential to the protection objectives of the Reserve (FEIS 1979). The proposed expansion parcels include a mix of both the transitional upland and wetlands. The inclusion of the proposed expansion land bordering the Reserve would assure a viable ecological unit under the uniform management of the Reserve. As stated above, additional upland area would provide a place for more support facilities and access sites for research, monitoring and recreational activities for the Reserve.

Chapter 3 DESCRIPTION OF ALTERNATIVES

This chapter describes the two alternatives for action considered by NOAA. Alternative 1, leaving the boundary as is (No Action); and Alternative 2, expanding the Elkhorn Slough Research Reserve boundary to include nine additional parcels and remove the parcel with a non-conforming use from the boundary (Preferred Alternative).

3.1 Alternative 1- No Action

Under the No Action alternative, NOAA would not approve the proposed boundary change. Therefore, there would not be a change to the current boundary of Elkhorn Slough Research Reserve. The boundary would remain the same as approved in the Elkhorn Slough Research Reserve 1979 FEIS and the Elkhorn Slough National Estuarine Research Reserve Final Management Plan, 2007-2011 and would maintain the Reserve's current size of 1,439 acres. The original biological, aesthetic, and socioeconomic needs to protect the natural resources would continue. Additionally, the management actions described above including education, research activities, and protection would continue. However, these benefits would not be afforded to the proposed expansion parcels.

Additionally, under this alternative, the removal of the 13.98-acre feedlot, which is a non-conforming use, would not occur, and additionally result in no exchange of land for the Moro Cojo parcel. The proposed expansion parcels include a mix of both the transitional upland and wetlands, which are ecologically important and significant. The inclusion of the proposed expansion land bordering the Reserve would assure a viable ecological unit under the uniform management of the Reserve.

As stated above, additional upland area would provide a place for more support facilities and access sites for research, monitoring and recreational activities for the Reserve. However, under this alternative these lands would not be included in the ESNERR boundary. For these reasons, the No Action alternative would not meet the identified purpose and need.

3.2 Alternative 2 - Preferred Alternative

Under the Preferred Alternative, NOAA would provide approval to:

(1) expand the Reserve's boundary area by 313.443 acres to incorporate the following properties currently owned by the State of California (Figure 1.3)

a. Garcia
b. Howell Life Estate
c. Howell,
d. Springer
e. Wells,
f. Tabor-Beck
g. Jazwin
h. Minhoto
i. Moro Cojo

(2) Remove a 13.98-acre portion of land associated with Seal Bend property within the current boundary that contains a feedlot, which is a non-conforming use.

These ESNERR-targeted properties are not large in acreage, but they are significant in terms of protected wetlands, buffers, or access to Reserve lands. These additional parcels of land would help to preserve the natural environment and provide a natural laboratory for the study of estuarine ecological relationships; prevent these areas from development into residential housing, which would result in erosion and sediment, chemicals, and nutrient loading into adjacent ESNERR wetlands. Habitat restorations on these properties would also further improve water quality draining into these wetlands. Additionally, removal of the 13.98-acre feedlot would ensure that the ESNERR properties are within the Management Plans conforming use parameters.

The preferred alternative would extend the comprehensive conservation and management capacities authorized by NOAA for the land in the existing NERR boundary to new areas, providing a mechanism for implementation of specific restoration, monitoring, and research activities for important estuarine resources. The incorporation of places of national significance into the NERR would support national ocean resource management objectives articulated by many publicly vetted and expert-driven strategic planning efforts under the administration of NOAA. At the same time, the opportunities for research, exploration, and education related to these significant ocean resources are critical for understanding changes occurring in the environment and the ecosystem services these resources provide for communities throughout this region. Therefore, a comprehensive management approach offered by NOAA approval is needed for the additional parcels acquired by CDFW, and the ESNERR is uniquely positioned to provide a coordinated conservation program to protect the additional ecologically vital areas in its vicinity. For these reasons, the Preferred Alternative would meet the purpose of implementing the NERR programs and plans on appropriate habitat parcels available for inclusion consistent with CZMA policies and the NERRS mission, and the Preferred Alternative would meet the needs described above, including extending the comprehensive conservation and management capacities authorized by NOAA in the ESNERR.

Table 3.1 describes the expansion parcels to be added to the ESNERR Reserve under the Preferred Alternative. Table 3.2 summarizes the acreage changes for each of the alternatives.

Table 3.1: Elkhorn Slough Expansion Parcels

Parcel name (and tax ID #)	Acres	Year Acquired	Core or Buffer	Habitats	Land Use History	Proposed Future Use
Garcia (129 211 001)	41.919	2008	Buffer	Maritime chaparral; Oak woodland	Home site, grazing and agriculture	Demolition of home site foundation pads; study of chaparral habitats, protection of intact habitat

Howell Life Estate (131 111 015)	1.84	2012	Buffer	Grassland; Oak woodland	Home site, grazing and agriculture	Demolition of house
Howell (131 111 017)	3.487	2007	Buffer	Upland habitats; Dry Lowlands	yard of home site	potential eucalyptus removal
Springer (131 081 002)	18.407	2008	Core and buffer	Grassland; Oak woodland; Ecotone habitats	Agriculture (strawberries)	Continued grazing research (buffer area), fencing improvements; expanded trails for public access
Wells (131 081 036)	21.369	2007	Core and buffer	Grassland	Farming and grazing	Continued grazing research
Tabor-Beck (131 081 022)	10.86	2008	Core and buffer	Oak woodland; grassland	Agriculture	Restoration of upland habitats
Jazwin (131 081 033)	6.451	2008	Core and buffer	Oak woodland; grassland; Ecotone habitats	Home site	Demolition of home site; grassland research
Minhoto (133 181 004)	193	2009	Core and buffer	Salt marsh; Grassland	Agriculture; Duck hunting club on low-lying areas	Wetland and grassland restoration; demolition of house and barn
Moro Cojo (133 172 011)	16.42	2016	Buffer	Muted tidal channel, tidal marsh, ecotone, restored oak woodland, scrub and grassland	Land used for grazing until early 2000s. Upland restoration began in 2002.	Upland habitats would be improved through removal of old restoration infrastructure (irrigation, plant cages). Ecotone and upland will be improved through control of invasive perennial pepperweed.

						Parcel provides Reserve access for researchers, and in future may include only public access to Moro Cojo

Table 3.2: Summary of Alternatives

Preferred Alternative	**Size (acres)**
Elkhorn Slough NERR (existing boundary)	1,439
Garcia parcel	+ 41.919
Howell Life Estate parcel	+ 1.84
Howell parcel	+ 3.487
Springer parcel	+ 18.407
Wells parcel	+ 21.369
Tabor-Beck parcel	+ 10.86
Jazwin parcel	+ 6.451
Minhoto parcel	+ 193.00
Moro Cojo	+16.42
Seal Bend Feed Lot	- 13.98
Preferred Total *(Reserve boundary expanded to include addition of 9 parcels and removal of 1 parcel)*	1,738.773 acres
No Action Alternative *(No changes to the existing boundary)*	1,439 acres

Chapter 4 AFFECTED ENVIRONMENT

Consistent with NEPA requirements, this chapter provides a narrative description of the physical, biological, and social/cultural resources affected by the alternatives presented in Chapter 3, including resources in both the current ESNERR boundary and the proposed expanded ESNERR boundary. The information in this section, together with other information in this document, provides the basis for NOAA's evaluation of the potential environmental impacts of the expansion alternatives as described in Chapter 5 (Environmental Consequences). The scope of the environmental impacts addressed in this EA includes those direct, indirect, and cumulative effects on the physical environment (air quality and climate, geology and substrates, water), the biological environment (living marine resources and protected species) and the cultural and human environment (cultural and historic resources and socioeconomics).

4.1 Physical Environment

4.1.1 Air Quality and Climate

In general, the air quality in and around Elkhorn Slough is good. The Monterey Bay Unified Air Pollution Control District (MBUAPC) operates air quality monitoring stations, three of which are in the regional vicinity of the slough (Salinas, Hollister, and Santa Cruz). Ambient air quality for Ozone, PM 2.5, and PM 10, is noted within good range at all three monitoring stations near the ESNERR (Figure 4.1) (https://air.MBUAPCD.org).

As can be seen in Figure 4.1, the overall air quality in the region is "good," with a score between 0 and 50 on a scale of 0 to 500. However, dry days and cool nights combined with smoke from wood burning devices has the potential to increase PM 2.5 concentrations in basins, ravines, and other areas of low elevation, especially in the San Lorenzo Valley. If these factors do combine, the air quality index rating could be raised to "moderate."

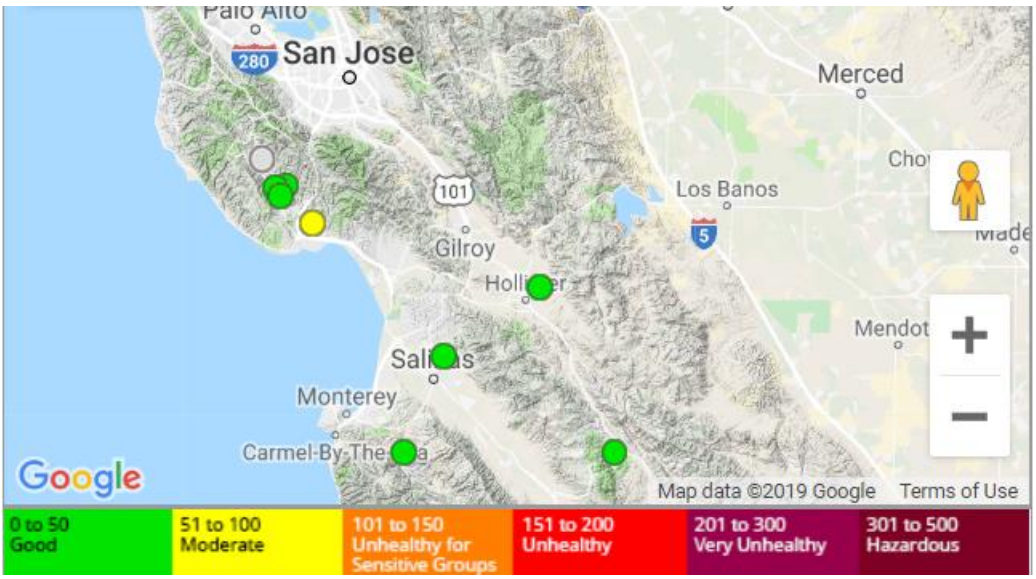

Figure 4.1: Air Quality Index in ESNERR Region

ESNERR has a mild and Mediterranean climate due to the Pacific Ocean and Monterey Bay's moderating effects. Because ocean temperatures fluctuate very little, the adjacent land experiences a narrow range of air temperatures. Relatively mild, wet winters and cool, dry summers are characteristic of this region. Although air temperatures at ESNERR range between 5℃ and 35℃ (41°F and 95°F) on a seasonal basis, the monthly means range from only 11.1℃ to 15.4℃ (52°F to 60°F). These moderate temperatures combine with distinct seasonal patterns of wind, fog and rain to create a maritime climate regime. Blankets of fog cool the Elkhorn Slough watershed in late spring and summer. Rainfall in the Elkhorn Slough region is highly variable, not only on a seasonal basis but also on annual and interannual timescales. Totals collected at Watsonville since 1879 and at the ESNERR weather station since 1992 show that most of the rainfall occurs between October and March, with an average rainfall of 55.2 cm (Site Profile 2002).

4.1.2 Wetlands

In the Elkhorn Slough watershed, freshwater habitats occur as riparian corridors, wet meadows, freshwater marshes, ponds, artificial watering holes (guzzlers), seeps, springs, and vernal pools.

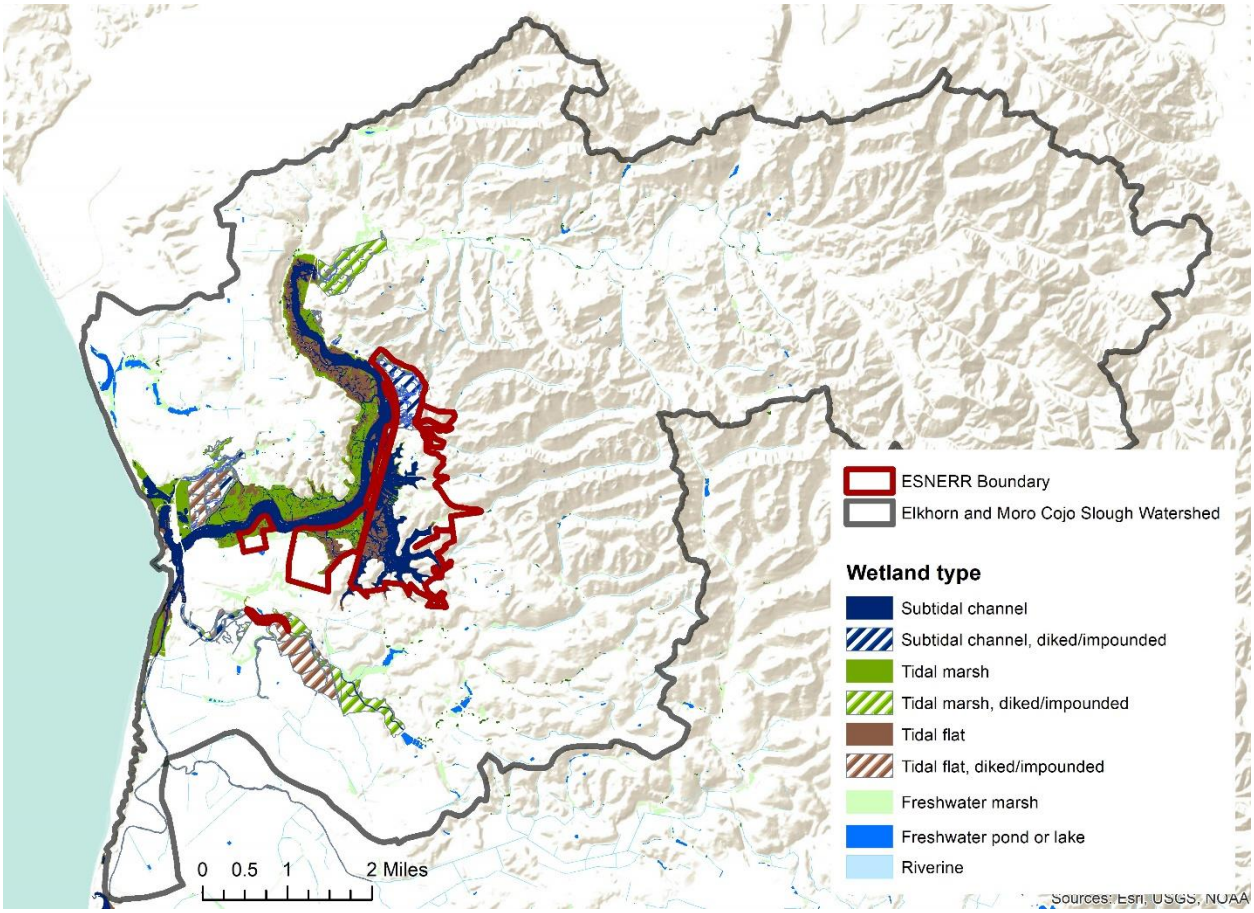

Figure 4.2. Wetlands in the Elkhorn Slough Watershed (ESNERR Management Plan)

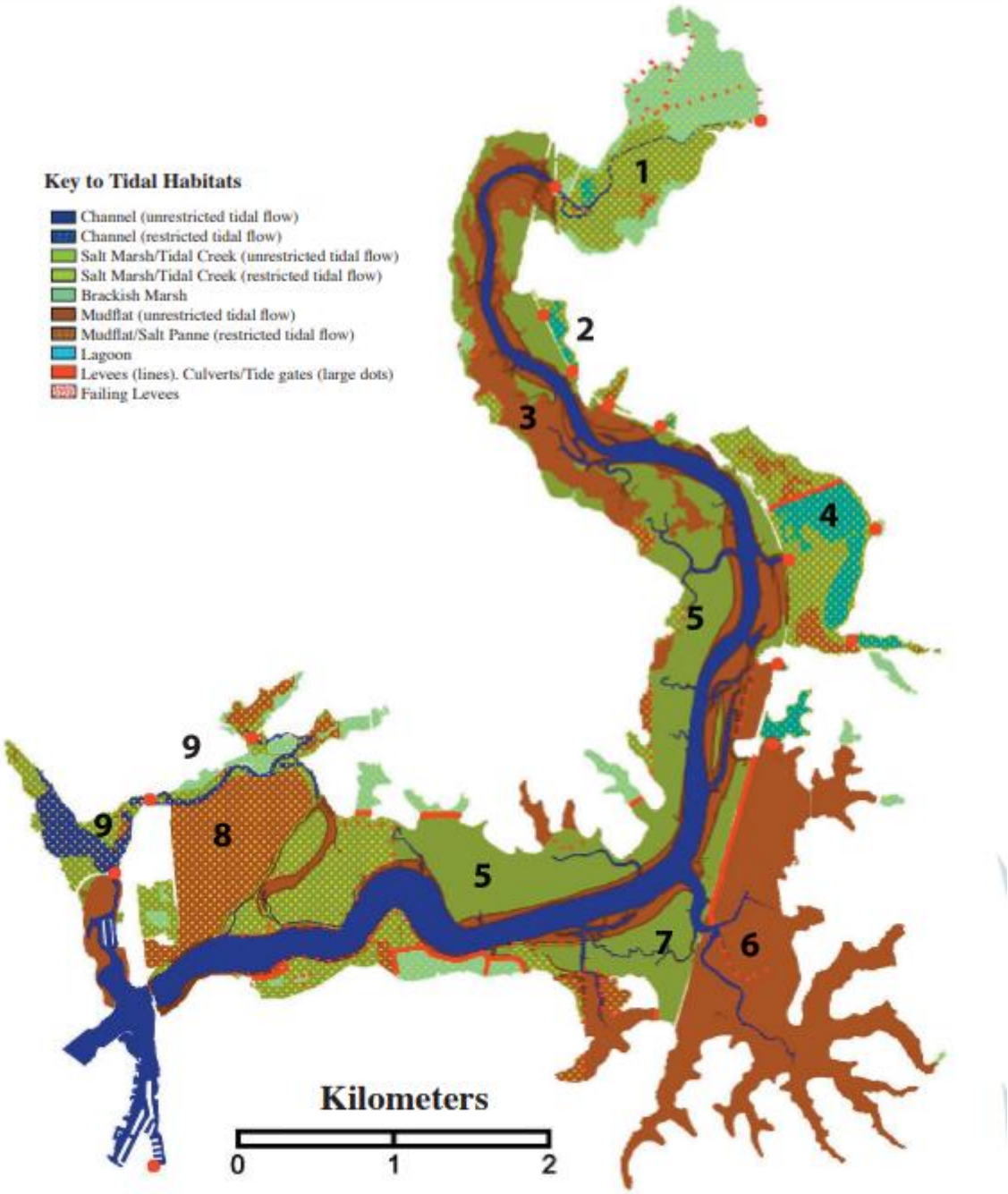

Figure 7. Spatial representation of Elkhorn Slough estuarine habitats based on GIS analysis of aerial photographs. The numbers refer to specific wetland complexes (Table 3, Page 20). The red dots indicate water control structures and red and white lines indicate levees.

Figure 4.3 Elkhorn Slough Estuarine Habitats (Elkhorn Slough Tidal Wetland Strategic Plan, March 2007)

The salt marsh ecosystem is a critical part of the overall environmental health of the Elkhorn Slough estuary. As depicted in Figure 4.2 and Figure 4.3 marine and estuarine wetlands make a significant portion of the ESNERR. However, hundreds of acres of salt marsh in the Elkhorn Slough were reclaimed and converted to pastures for local dairies. By the 1960s, approximately 900 acres (30 percent of all tidal marsh areas) in Elkhorn Slough were isolated from the Slough and converted for human uses through diking and draining. The construction of dikes caused the marsh surface to subside, which occurs because of several processes including drying out of soils, soil compaction, and organic matter decomposition, loss of sediment imported with regular tidal flooding, and changes to water movement and storage. In areas where full or muted tidal flow has been returned to these subsided wetlands, mudflats and lagoons have replaced historic salt marsh because of a decrease in elevation of several feet. While some areas of the estuary were subject to artificial decreases in tidal exchange, the undiked portion of Elkhorn Slough faced a contrasting alteration. In 1946, the Army Corps of Engineers opened a new mouth to the estuary to accommodate Moss Landing Harbor. The artificially deep mouth to the estuary increased tidal amplitude and current speeds in the estuary, leading to substantial tidal scour of the main channel and contributing to salt marsh loss (TWP 2007). In addition to changes in tidal exchange, the estuary also experienced dramatic decreases in freshwater inputs through the diversion of the Salinas River in the early 1900s, and subsequently through intensive use of groundwater for agriculture. Salt marsh stratigraphy reveals that episodic events (i.e. riverine flood deposits) were a natural part of the estuary's past, but ceased in the past century (Watson et al. 2011). This paleo-ecological analysis also showed that while the estuary's vegetated habitats were salt marsh dominated in all periods, representation by freshwater plants decreased over the past century. Evidence also suggests that the Pajaro River may have contributed freshwater to Elkhorn Slough but the frequency and magnitude of this contribution is unknown. Losses of freshwater and associated sediment delivery, increased tidal range, and subsidence (perhaps due to tectonics, groundwater overdraft, or eutrophication effects on plant roots) have contributed to relative sea level rise in undiked parts of the estuary, making remaining salt marsh highly vulnerable to drowning and increased sea levels.

On October 5, 2018, Elkhorn Slough was designated as a "Wetland of International Importance" by the Secretariat of the Ramsar Convention on Wetlands. With this recognition, the Elkhorn Slough joins 38 other wetland sites in the U.S., including the San Francisco Bay estuary and more than 2,330 sites worldwide, in a network of globally important wetlands designated under the world's oldest international environmental treaty. The Elkhorn Slough National Estuarine Research Reserve and Elkhorn Slough Foundation completed 61-acres of the Hester Marsh restoration project, and soon to begin phase 2 within the existing boundary, which will complete the 100-acre wetland restoration project. Like many of the marshes of the Elkhorn Slough, Hester Marsh was diked and drained for farming during the last century, resulting in a marsh plain elevation too low to support salt marsh. The restoration project provides the elevation needed to support tidal marsh habitat that will withstand changes in sea level over the next century and continue to provide important habitat for fish, plants and wildlife (ESNERR Press Release 2018).

4.1.3 Hydrology and Hydrography

The ESNERR has saline both tidal and non-tidal waters. The waters of the NERR site follow a general transition inland from saltwater to mudflats, then to tidal marsh lands, and finally to uplands. Within the Slough, the waters generally transition from higher salinities near the mouth to lower salinities in the upper portions that receive freshwater input. This is affected by artificial water control structures, which lead to abrupt changes in salinity. Significant changes such as dewatering and loss of habitat have compromised the ecological processes and productivity of the ESNERR. Presently, approximately 28 percent of all tidal marsh areas in ESNERR have been isolated from the slough and converted for human uses through diking and draining. These portions are completely cut off from tidal flow and have a non-variable salinity level.

Tidal currents in ESNERR have increased significantly during the last few decades and continue to rise. The increased tidal currents have resulted in the scouring of the channels, reshaping ESNERRs physical appearance and changing its hydrological characteristics. Erosion continues to alter the slough's shape, as muddy effluent ebbs into Monterey Bay.

4.1.4 Geology and Substrates

The geology of ESNERR is defined by its proximity to the San Andreas Fault. This plate tectonic boundary defines California's geology, and has fundamental control on the general landscape of this area. In addition, ESNERRs geology is further modified by the erosion, deposition and sea level history as well as by the physical processes of wave and current activity. Elkhorn Valley lies within the Salinian Block microplate, a wedge of granitic crust that originated south of the Sierra Nevada and was transported to its present location by movement along the San Andreas Fault zone.

In addition, the Reserve lies within the Salinian Block, which is bordered on the east side by the San Andreas Fault zone and on the west by the San Gregorio and Nacimiento Fault zones. Right lateral, strike slip motion along these active fault zones continues to transport the Salinian Block northwestward at a current rate of 27–33 millimeters per year. Therefore, local subsidence resulting from the seismic activity contributes significantly to the accelerated erosion within the ESNERR region (Site Profile 2002).

4.2 Biological Environment

The Reserve contains a suite of habitats from the deep channel to mudflats, and salt marsh. Over 1,000 animal species have suitable habitat in the ESNERR project site. Land management, or stewardship, has played an important role since the Reserve was designated as a CDFW Ecological Reserve in 1980. To the west of ESNERR in the Pacific Ocean are the deep-water habitats of the submarine Monterey Canyon with its array of unusual biota. The walls of the canyon rise up to converge with the underwater coastal plain. These ocean habitats converge very close to shore, attracting a variety of wildlife. At the water's edge next to the Reserve is the transition zone. This extraordinary ecotone area blends habitats and creates an unlikely juxtaposition of species.

Within the existing boundary, 19 federally listed species are potentially present, including one mammal, seven birds, three amphibians, one fish, one crustacean, and six flowering plants. Additionally, critical habitats for the California red-legged frog and Western snowy plover are present within the NERR

boundary. The nine parcels proposed for incorporation do not provide unique habitat for any additional listed species; the listed species potentially found within the ESNERR boundary can be found throughout the proposed incorporation parcels, where suitable habitat is found. The designated critical habitat area for the California Red-legged frog extends to the Howell and Howell Life Estate parcels. The following habitat descriptions are from "Changes in a California Estuary – A Profile of Elkhorn Slough", which encompasses ESNERR, the proposed incorporation parcels, and surrounding region.

4.2.1 Plants

The Elkhorn Slough region is home to a vibrant community of primary producers, with more than 500 species of terrestrial plants within the upland, marsh, and subtidal regions, and the marine habitats hosting eelgrass and over 100 species of algae and phytoplankton. USFWS identifies seven federally-listed species of flowering plants to be present, but no critical habitat is designated within the NERR boundary. Terrestrial primary production, the production of biomass via photosynthesis, is regulated by the seasonal variation of light availability, temperature, and moisture. Primary productivity typically peaks in the spring, about February to June, which overlaps and follows the rainy season of November to April. The summer months brings a halt to most production except some woody perennials. The summer drought also brings the early (mid-June) maturation of dominant annual grasses, as well as the early dormancy of drought-deciduous perennials. Fog is common during the summer in coastal habitats, which moderates the effects of drought. Winter frost is rare except in low-lying areas, like canyon basins, where cold air can accumulate at night. In contrast to terrestrial primary producers, marine productivity peaks from late spring through summer, when prevailing winds bring cold, nutrient-rich water to the coast.

Threats to primary producers are unsurprisingly largely anthropogenic. A main issue is the introduction of non-native species, which alternative primary production patterns. Facets of modern society, including livestock grazing, crop cultivation, and higher housing density contribute to increased nutrient runoff into slough waters. Eutrophication (increased nutrient concentration), both in estuaries in general and Elkhorn Slough in particular, can lead to extensive algal blooms, depleting oxygen concentration in the water and creating and threatening environment for native species. Figure 4.3 depicts land coverage of the existing Elkhorn Slough NERR as well as the proposed incorporation parcels.

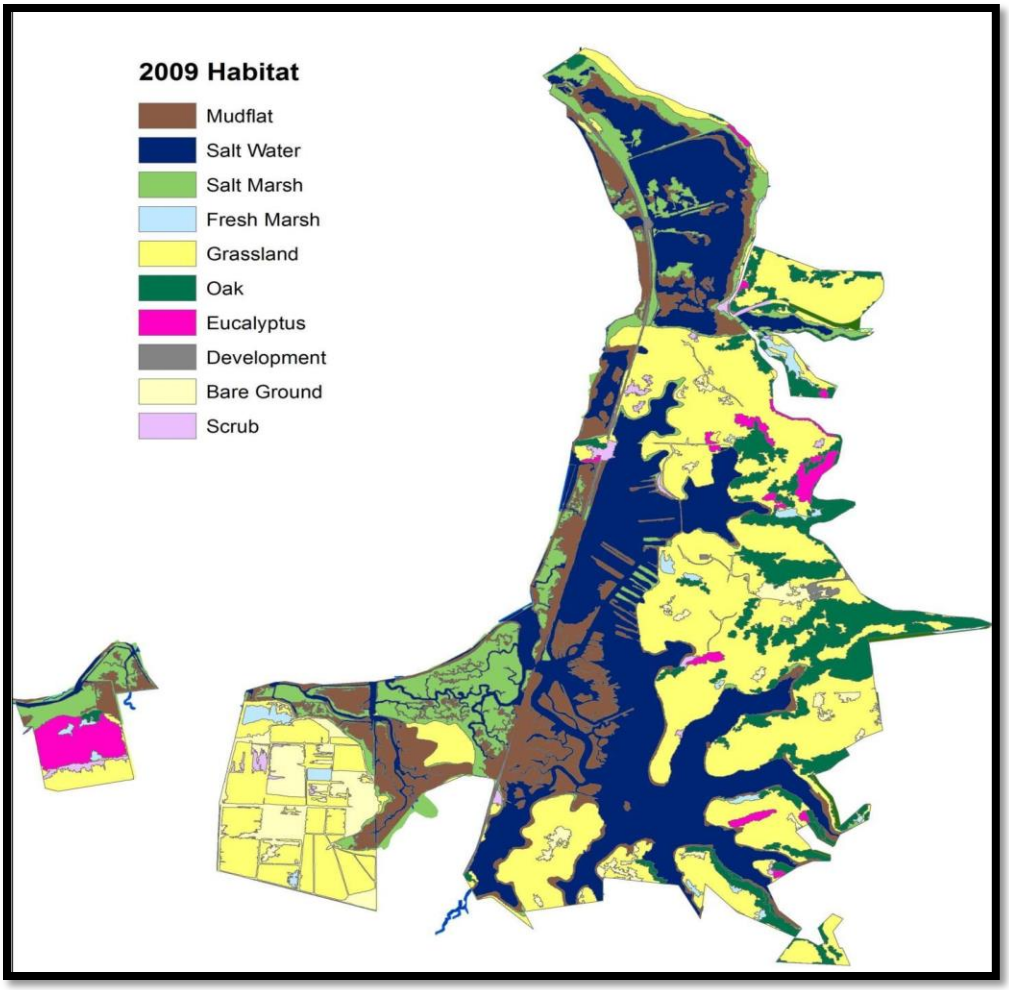

Figure 4.4. Vegetation and Land Use in ESNERR, 2009. Source: Van Dyke, NERRS

Upland

The upland terrestrial habitats of the Elkhorn Slough region represent a vegetation profile unique to the westernmost hills of the Coast Ranges. Present within the upland regions of the Elkhorn Slough are grasslands, woodlands, chaparral, scrub, and agricultural fields. The extensive summer drought leads to fire being a strong force within terrestrial communities, burning at low heat to reduce annual species while passing over woody perennials.

Grasslands occupy the drier, south-facing slopes of the Elkhorn watershed. Species present include *Vulpia* and *Bromusi spp*., mustard (*Brassica nigra*), and coyote bush (*Baccharis pilularis*), as well as the occasional coast live oak (*Quercus agrifolia*). The grassland community has suffered the most from livestock grazing and raw crop agriculture, as well as the succession of exotic plant species. Grasslands are highly dependent and reflective of the rainy season, where species are dormant during the driest summer months, germinate seeds in the fall, and flower in late spring at the end of the wet season.

Woodlands occur in locations that are sheltered from the summer sun, such as higher, north-facing slopes, canyon bottoms, and along river courses. Species within dry, native-oak woodlands include coast live oak (*Quercus agrifolia*), poison oak (*Toxicodendron diversilobum*), and toyon (*Heteromeles arbutifolia*). Other drought-moderated areas include distinct, monotypic stands of non-native blue gums (*Eucalyptus* ssp.), which dominate the landscape while failing to provide resources to other native species. Conifers cover a small portion of the watershed and include Monterey pine (*Pinus radiata*) and Monterey cypress (*Cupressus macrocarpa*). Riparian woodlands are characterized by perennial species like willows (*Salix* ssp.), buckeye (*Aesculus californica*), and sycamore (*Platanus racemosa*). Woodland species are significantly less dependent on the rainy season than grasslands, and many woody species are able to conserve water, as well as absorb nutrients for litterfall and throughfall.

Maritime chaparral and sage scrub are shrub communities within the Elkhorn watershed. Chaparral is an assemblage of woody shrubs with hard, thick evergreen leaves, and is essential to preventing mudslides and erosion on sandy slopes. Maritime chaparral is primarily comprised of manzanita species, like *Arctosphylos pajaroensis* and *A. Hookeri*, and is resistant to non-native species. Sage scrub is comprised of native coastal sage scrub, which is found primarily on old fields or other disturbed areas within maritime chaparral or oak woodland. This scrub consists mainly of poison oak, but coyote brush, sage (*Salvia* ssp.), sagebrush (*Artemisia* ssp.), and monkeyflower (*Mimulus* ssp.) are also present. Both maritime chaparral and sage scrub can grow year-round, but production peaks in spring when maximum moisture is available and day length is increasing.

Dune scrub and beach occur along the western margin of the Slough and support a fragile and distinctive plant assemblage. The native plants in this habitat have been largely replaced by non-native species. The most common plants found in this type of habitat are ice plants (*Carpobrotus edulis*, *C. chilense*, and *Mesembryanthemum* ssp.), which were introduced primarily for beach stabilization. Other common species include sea rocket (*Cakile maritima*), beach saltbrush (*Atriplex leucophila*), beach burr (*Ambrosia chamissonis*), mock heather (*Ericameria ericoides*), and beach sagewort (*Artemisia pycnocephala*). Species composition in dune habitats is dependent on salinity from salt spray, flooding, and moisture content, which lead to the success of many annual, short-lived species. There is generally a trend of increasing substrate stability and vegetational complexity as one moves away from the ocean. Additionally, these habitats are in a constant state of successional flux, largely dependent on light penetration and plant size.

Agricultural fields within the Elkhorn Slough watershed are supported by managing moisture, nutrients, temperature, light, grazing, and pest infestation. Primary crops include strawberries, artichokes, raspberries, apples, and flowers. Extensive use of groundwater for irrigation is necessary during the summer to support crop growth. Chemical fertilizers and pesticides are used throughout the watershed; however, work is being done to phase out harsh chemicals.

Marsh Habitats

Salt marshes are the tidal wetlands between the permanently dry uplands and permanently flooded slough. Marsh habitats are highly saline, following the diversion of the Salinas River and dredging of Moss Landing Harbor. The high salinity of the Slough puts stress on primary producers, reducing both

photosynthesis and overall biomass. This habitat is dominated by pickleweed (*Salicornia virginica*), which has a large need for nitrogen. Cordgrass (*Spartina* ssp.), which also needs high nitrogen content, is noticeably absent from the Slough, although it is an important component of many brackish wetlands. The upper marsh is flooded only during very high tides, and has high soil salinity; naturally, this area supports species that are mildly tolerant of the higher salinity. Erosion within the Slough is converting previously extensive tracts of pickleweed-dominated salt marsh into tidal mudflats; this is worsened by a loss of salt marsh vegetation and overall biodiversity.

Marine Primary Producers

Phytoplankton are primary producers within the marine habitats of the Slough. A rich community of phytoplankton is present due to the rapid tidal exchange between the Slough and Monterey Bay. Diatoms are the primary phytoplankton within the Slough's highly turbid waters. Phytoplankton concentrations peak between June and September, when drought is prominent, and nutrients become more concentrated within the water. Nutrient-rich runoff throughout the rest of the year has little impact on phytoplankton concentrations, due to lack of light penetration. In general, phytoplankton concentration, as indicated by chlorophyll *a* concentration, is highest is areas with restricted circulation, and is lowest in well-flushed areas.

Common macrophytic algae present within the Slough include green algae (*Enteromorpha* ssp., *Ulva* ssp., and *Derbesia marina*) and red algae (*Gracilariopsis lemaneiformis, Gracilaria pacifica, Griffithsia* ssp., and *Porphyra* ssp.). Brown algae like kelps are rare within the Elkhorn Slough region. Expansion of mudflats and loss of pickleweed marsh facilitated explosive growth of the green algae which causes extensive floating mats that can clog smaller waterways. Additionally, these masses of algae block sunlight from reaching other primary producers further down the water column. Other green algae frequently colonize intertidal mudflats and subtidal habitats in the slough, particularly in the summer months. Red algae become abundant on intertidal mudflats and subtidal habitats in fall and winter, following the subsiding of the green algae blooms. Algae growth in general is moderated by desiccation, temperature, availability of light, and concentration of nutrients like nitrogen, carbon, and oxygen.

The primary seagrass in the Elkhorn Slough region is eelgrass (*Zostera marina*), yet this species has declined by 95% since the 1920s. Dredging and high erosion rates in the main channel of the Slough led to the loss of most of the shallow habitat that eelgrass needs in a turbid area. Eelgrass is vulnerable to light limitation, which can be caused by phytoplankton and weedy macrophytes. Broadening and shallowing of some parts of the main channel have allowed the eelgrass population to expand, potentially offsetting some loss of ecological function. Transplantation efforts have generated mixed results, but has been most successful in areas with water flow strong enough to prevent buildup of floating algae and debris that block sunlight infiltration (A Profile of the Elkhorn Slough).

4.2.2 Invertebrates

Invertebrates within the Elkhorn Slough region are supported by a variety of habitats, including marine, terrestrial, and freshwater. Of the three, marine habitats have been studied the most, and therefore the most is known about the species present there. Burrowing invertebrates, like clams and worms, are

prevalent in the soft sediments of intertidal and subtidal mudflats. Other invertebrate marine species included mobile animals such as snails and crabs, sessile fouling (immobile organisms fixed on artificial surfaces) organisms like bryozoans and ascidians, and drifters like plankton. Freshwater habitats are associated with riparian areas within the watershed. Terrestrial habitats, including upland marshes, grasslands, and oak woodlands, are home to invertebrates like spiders and insects. Again, since little research has been performed on freshwater and terrestrial habitats within the Slough watershed, little is known about the communities present within.

Over 550 species of marine invertebrates within 16 phyla are present within the Slough. Most common are polychaetes, crustaceans, and bivalves, with over 100 species of each present. In addition to these numerous native faunae, approximately 50 non-native species have been introduced due to human influence.

Dominant Species

Benthic intertidal infauna can occur throughout the Slough, especially small crustacean species. They can be widespread or can be localized to one area. Benthic invertebrate communities differ between the upper and lower Slough. Infauna diversity is greatest near the mouth of the Slough and decreases towards the head. A gradient of sediment particle size exists, with coarse beach sands near the mouth of the estuary and fine silts closer to the head. This leads to a gradient of suspended particles as well, thus creating a turbidity gradient. Species that prefer coarser sands for burrowing, and those that rely on clearer water for suspension feeding, are more likely to be found at the mouth. Additionally, species that rely on more constant water parameters (dissolved oxygen, salinity, temperature, etc.) are more likely to be found at the mouth, where these factors are moderated by the adjacent ocean water. The bent-nosed clam (*Macoma nasuta*) is the most prominent bivalve in the lower Slough, yet is absent from the upper Slough. Also confined to the lower slough are the gaper clam (*Tresus nutallii*), littleneck clam (*Protothaca staminea*), and Washington clam (*Saxidomus nutallii*), and basket cockles (*Clinocardium nutallii*), all of which are collected by humans for food. The blue mud shrimp (*Upogebia pugettensis*) is also confined to the lower Slough. The ghost shrimp (*Callianassa californiensis*) and some polychaetes can be found in the lower and middle Slough regions. The upper Slough and its calmer waters are home to a higher percentage of non-native species, which include the Atlantic gem clam (*Gemma gemma*) and the Japanese littleneck clam (*Venerupis philippinarum*). The native razor clam (*Tagelus californianus*) and several species of polychaetes can also be found within the upper reaches of the Slough.

Benthic intertidal epifauna communities have been studied less in-depth within the Elkhorn Slough region, but also appear to vary based on distance from the mouth of the Slough. Large mobile species, such as the moon snail (*Polinices lewisii*), sea hares (*Aplysia californica* and *Chelidonura inermis*), and the ocher sea star (*Pisaster ochraceus*) occur mostly within the lower Slough. The Japanese mud snail (*Batillaria attramentaria*) occurs everywhere but is most abundant in the upper slough. Two grasped shore crabs (*Hemigrapsus oregonensis* and *Pachygrapsus crassipes*) occur through much of the Slough, the *Cancer* crabs are found primarily in the lower Slough, and the non-native green crab (*Carcinus maenas*) is found primarily in the upper Slough. While not heavily researched, it has become apparent that some species are strictly associated with eelgrass beds. Additionally, sessile, suspension-feeding invertebrates like anemones, sea stars, barnacles, and hydroids can be found within the lower Slough on

jetties and bridge pilings. These man-made structures also host non-native species such as the bay mussel (*Mytilus galloprovincialis*) and the bryozoan *Watersipora subtorquata*. The mid-Slough (particularly ESNERR) and upper Slough are home to fouling non-native species, including sponges, bryozoans, hydroids, anemones, and ascidians. The mid and upper regions are home to one conspicuous native species, the oyster (*Ostrea conchaphala*), which forms extensive beds that provide substrate for non-native species.

Subtidal communities, similar to intertidal communities, show distinct differences between the upper and lower Slough regions. In the lower Slough on the Highway 1 bridge, pilings and surrounding rocks are covered with the anemone *Metridium senile*. The *Anthropleura* anemone and mussels (*Mytilus* ssp.) are occasionally found here. Large gaper clams (*Tresus nuttallii*), fat innkeepers (*Urechis caupo*), and rock crabs (*Cancer antennarius*) are prevalent in the soft substrate of the lower Slough. Further up the Slough, a sandy mud bottom is populated with rough piddock (*Zirfaea pilsbryi*), and a few gaper clams, fat innkeepers, polychaetes, moon snails, and sea hares. Around mid-Slough, softer bottom sediments are dominated by rough piddock, but are also inhabited by the tube-dwelling anemone (*Pachycerianthus fimbriatus*), various polychaetes, and large moon snails. On up the Slough, remnants of attempted oyster cultivation harbored a rich epifauna community. In the soft mud bottom of the upper Slough, few large clams are present, but it is home to sponges, burrowing anemones, and nudibranchs.

Little is known about planktonic invertebrates within the Elkhorn Slough region. Zooplankton tows have been performed, identifying calanoid copepods of the genus *Acartia* as the most abundant. Zooplankton concentration, primarily *Acartia californiensis* was most dense within the upper Slough, with *Acartia tonsa* and *Acartia clausii* dominating within the lower Slough and open coast. Planktonic invertebrate larvae follow the same spatial distribution as adult plankton. Spawning takes place toward the mouth of the Slough, with peak abundances during late fall to winter. 11 species of crab have been documented throughout the Slough, with burrowing species being the most prevalent of larvae studied. Some species were identified in all life stages, some only in larval stages (suggesting that they mature elsewhere), and some only in more mature stages (suggesting spawning elsewhere).

Freshwater and Terrestrial Invertebrates

Very little is known about freshwater and terrestrial invertebrate species within the Elkhorn Slough region. A key freshwater habitat occurs in Carneros Creek, flowing in to the upper Slough. Invertebrates such as crayfish, beetles, mayflies, dragonflies, water boatmen, whirligigs, backswimmers, and midges can be found in this creek. Many other freshwater areas near the mouth of the Slough have yet to be studies. Grasslands, oak woodlands, and other uplands within the Slough are host to a variety of terrestrial invertebrates, including insects, spiders, isopods, earthworms, and snails. Additionally, 23 species of butterflies, 50 species of moths, and over 100 other species of insects have been identified within the ESNERR boundary. Throughout the region, 8 spider families and 4 earthworm families have been identified as well.

4.2.3 Fish

Fish species within the Elkhorn Slough are among the most conspicuous as well as best-studied inhabitants, compared to other categories of animals. Fish fauna within the region is abundant and diverse, containing both marine and estuarine species. The Slough provides habitat for both year-round and transient species.

Common and Best-Recognized Species

Among the common and best-recognized species are the surfperch (Embioctids), the Pacific staghorn sculpin (*Leptocottus armatus*), the northern anchovy (*Ingraulis mordax*), the speckled sanddab (*Citharichthys stigmaeus*), leopard sharks (*Triakis semifasciata*), and the starry flounder (*Platichthys stellatus*). There are 14 species of surfperch that can be found within the Slough; they are part-time residents which enter the Slough to spawn in shallow waters in the summer and leave the Slough for deeper water in the winter. The Pacific staghorn sculpin is able to tolerate a wide range of salinities and primarily is found in the upper Slough although they can be found throughout. The northern anchovy enters the Slough in the summer and fall to spawn in the shallow inland areas. The speckled sanddab commonly occurs in the Slough entrance throughout the summer and fall during the egg, larval, and juvenile stages. The leopard shark is a part-time resident of the Slough, becoming abundant in spring and summer to give birth in warm tidal creeks. The starry flounder is not currently abundant within the Slough but can be found year-round throughout.

Distribution by Habitat

The Elkhorn Slough can be divided in to distinct fish habitats: the Moss Landing Harbor and adjacent nearshore sandflats of Monterey Bay; the lower and upper main channel and tidal creeks; Bennet Slough; the southern pickleweed marshes; and salt evaporation ponds. In general, fish distribution patterns vary with distance from the mouth of the Slough, dependent on water depth, tidal influence (salinity and current), and other biological components.

Moss Landing Harbor and the adjacent coastal waters have not been thoroughly surveyed for fish assemblages, but sporadic sampling indicates that the Harbor is comprised of a mixture of coastal fishes and lower Slough species. Abundance of fish is generally low, but a wide variety of species is present compared to the upper reaches of the Slough.

The main Elkhorn Slough channel and tidal creeks have been surveyed extensively, and much is known about species composition, abundance, and distribution of fishes in this area. Species in this portion of the Slough include shiner surfperch (*Cymatogaster aggregata*), Pacific staghorn sculpin, English sole (*Parophrys vetulus*), northern anchovy, Pacific herring (*Clupea pallasii*), cabezon (*Scorpaenichthys marmoratus*), and the California tonguefish (*Cynoglossidae*). Community composition varies between sampling stations, but these are the most predominant species throughout the main channel. Overall, a general trend of decreased species diversity had been identified from studies performed between 1970 and 1990. Diversity is similar at both deep main channel sampling stations and shallow upper Slough stations. The highest diversity is found at the Route 1 Bridge station, likely due to the diversity of habitats present as well as the proximity to the ocean. Traveling up the main channel away from the ocean shows a

general decline in species diversity, both in the Elkhorn Slough and similar estuarine regions. See Figure 4.5 for the location of sampling stations throughout the region.

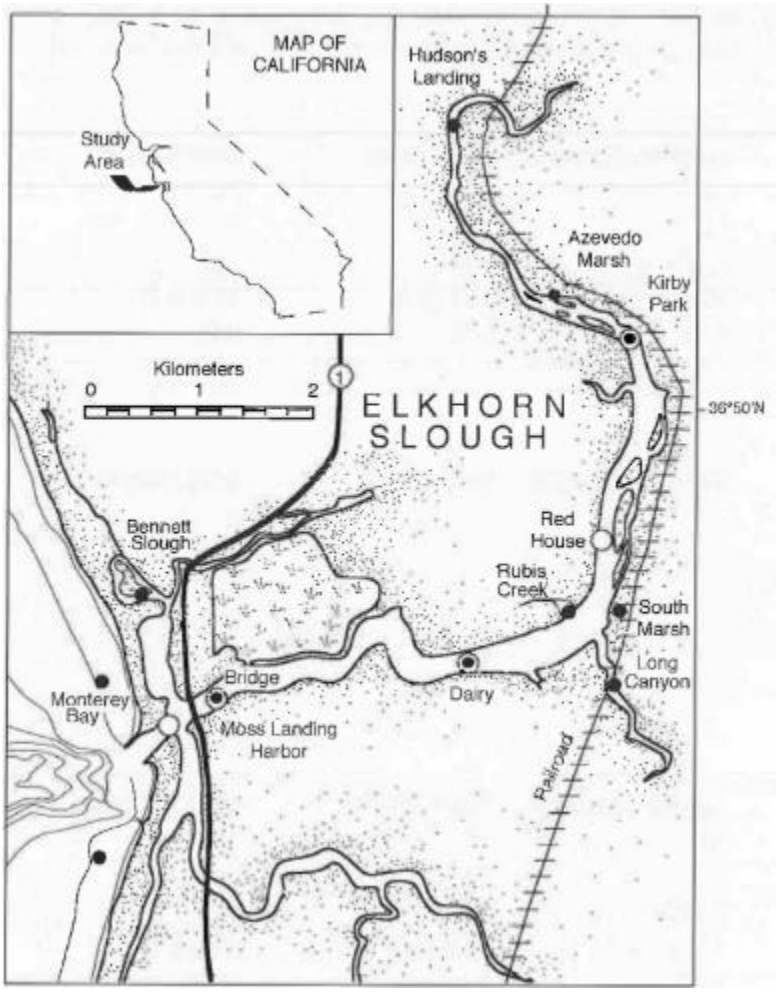

Figure 4.5 Diagram of Fish Sampling Locations Throughout ESNERR. *Juvenile and adult (•) and larval (◦) fish sampling locations in Elkhorn and Bennett Sloughs and the adjacent nearshore ocean.*

Bennett Slough, a tidally-influenced embayment connected to Elkhorn Slough via six culverts at the north of Moss Landing Harbor, has a soft mud bottom under shallow water. Species in this slough are similar to those in the tidal creeks of Elkhorn Slough. Roughly 20 species of fish can be found in this embayment, primarily Pacific staghorn sculpin, starry flounder, and arrow goby. Jacksmelt (*Atherinopsis californiensis*), topsmelt (*Atherinops affinis*), and three-spined stickleback (*Gasterosteaus aculeatus*) are also common. Most of these species can also be found at least part-time within Elkhorn Slough.

South Marsh restoration site, located along the western border of the Yampa Island/Marsh parcel, was previously cut off from tidal flow, but has been restored. Once restoration was complete, species diversity increased (16 species present) but overall abundance decreased. Marine and brackish-water species are more prevalent than freshwater species; dominant species include Pacific staghorn sculpin and northern anchovy. Other common species include the arrow goby, California tonguefish, Pacific herring (*Clupea*

pallasii), longjaw mudsucker (*Gillichthys mirabilis*), plainfin midshipman (*Porichthys notatus*), English sole (*Parophrys vetulus*), shiner surfperch, yellowfin goby, and bay goby.

The Azevedo Marsh system, north of the ESNERR, is comprised of several salt evaporation ponds, and was separated from the main Slough by diking in the late 1800s. These ponds are connected to the Slough via culverts, therefore participating in significant tidal exchange. The water quality in these ponds is highly variable, and the ponds are dominated by seasonally changing plant assemblages. The fish species in salt ponds comprise a similar community to that of Bennet Slough: the dominant species are Pacific staghorn sculpin, arrow goby, and topsmelt. Other common fishes include northern anchovy, shiner surfperch, mosquitofish, three-spined stickleback, and yellowfin goby. Due to the variable water constitution, this collection of species is not presumed to be constant; changing salinities may cause the addition and loss of species.

Seasonality and Spawning

The abundance and distribution of fish species varies from season to season, primarily as a function of reproductive habits. This Slough, like other similar systems, serves as a spawning ground and nursery for many species of fish. Compared to the open ocean, the Slough's waters are protected, provide food sources, and a variety of habitats with suitable temperatures for reproduction. Overall, the abundance and diversity of species peaks in the summer and begins to decline in the fall, when partial-resident and marine-immigrant juveniles leave the Slough for the ocean. Fishes that remain in the Slough year-round are more tolerant of variable salinities.

Fish Eggs and Larvae

Some fish lay eggs that float freely, while some lay eggs that are attached to a substrate. Floating eggs and newly-hatched larvae can be moved by wind and water currents. Larval fish assemblages vary seasonally within Elkhorn Slough. Northern anchovy, longjaw mudsucker goby, and arrow goby larvae are most abundant in summer and fall. This anchovy spawn primarily in the summer and early fall, while the gobies spawn from February to September. During the winter and early spring, lower quantities of Pacific staghorn sculpin, surf smelt, topsmelt, jacksmelt, and Pacific sand lance are the dominant larvae found within the Slough. Two distinct larval assemblages are found within the Slough: inland and near-ocean; the difference is attributed to reproductive specialization.

Feeding Habits

Based on stomach content analysis, the fishes of Elkhorn Slough have been divided into four categories of diet similarity. The first group includes the Pacific staghorn sculpin (*Leptocottus armatus*), arrow goby (*Gobiiformes* ssp.), shiner surfperch, and speckled sanddab; these fish feed primarily of epifaunal crustacea (like amphipods and copepods). The second group includes the English sole, starry flounder, white surfperch (*Phanedron furcatus*), and bat ray (*Myliobatis californica*); these species feed mostly on mollusks and infaunal worms. The third group, consisting of sand sole (*Psettichthys melanosticus*), leopard shark, and white surfperch, preys on mobile crustaceans (like shrimp and crabs). The fourth group

consists of topsmelt, Pacific herring, and northern anchovy, which feed primarily on zooplankton and diatoms in the water column (A Profile of Elkhorn Slough).

Essential Fish Habitats

Essential Fish Habitat (EFH) was defined by the U.S. Congress in the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act, or Magnuson-Stevens Act, as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." Implementing regulations clarified that waters include all aquatic areas and their physical, chemical, and biological properties; substrate includes the associated biological communities that make these areas suitable for fish habitats, and the description and identification of EFH should include habitats used at any time during the species' life cycle. EFH includes all types of aquatic habitat, such as wetlands, coral reefs, sand, seagrasses, and rivers.

NOAA Fisheries works with the regional fishery management councils to designate EFH using the best available scientific information. EFH has been described for more than a 1,000 managed species to date. The main purpose of EFH regulations is to minimize the adverse effects of fishing and non fishing impacts on EFH to the maximum extent practicable.

Review of the EFH Mapper (https://www.habitat.noaa.gov/application/efhmapper/) returned no designated EFH within the Elkhorn Slough NERR.

4.2.4 Birds and Mammals

The American Bird Conservancy recognizes the Elkhorn Slough as a Globally Important Bird Area, with over 265 bird species recorded within the Elkhorn Slough region. Most of the bird species are seasonal visitors, but 40 are year-round residents. Aquatic birds—shorebirds, seabirds, herons, and waterfowl—account for much of the Slough's avian diversity. There are 59 species of mammals within the watershed, five of which are marine. While bird and mammal species have their preferred habitats, they are mobile, and may be found in a variety of environments.

Aquatic Habitats

Channel, Harbor, and coastal waters attract seabirds and marine mammals from Monterey Bay. The majority of these species are just visitors, seeking food or shelter from the rough ocean and predators. A few of these species enter the Slough to bear their young. About 50 species of seabirds and 35 species of waterfowl have been observed within the Slough and surrounding areas. Some birds prefer the rougher waters at the mouth of the Slough, while some prefer the calmer waters found further up the Slough. Moss Landing Harbor hosts several rare species, including the yellow-billed loon (*Gavia adamsii*), red-necked grebe (*Podiceps grisegena*), harlequin duck (*Histrionicus histrionicus*), long-tailed duck (*Clangula hyemalis*), and black skimmer (*Rhynchops niger*). Additionally, some diving seabirds can be found in the lower Slough. Only two species of marine mammals are consistently found within the cannels of the Slough: the harbor seal (*Phoca vitulina*) and the sea otter (*Enhydra lutrisi)*. Harbor seals are found year-

round, particularly around Seal Bend in the lower Slough. Sea otters can be found throughout the Slough but are mostly found in the lower regions as well.

Beaches in the Slough are exposed to high winds, wave action, and human disturbance, yet still provide seasonal feeding habitat for shorebirds and roosting sites for gulls and terns. Species composition on beaches varies seasonally. Common shorebirds include sanderlings (*Calidris alba*), willets (*Tringa semipalmata*), marbled godwits (*Limosa fedoa*), whimbrels (*Numenius phaeopus*), black-bellied plovers (*Pluvialis squatarol*), and snowy plovers (*Charadrius nivosus*). Along with foraging, these birds also find important nesting habitat on the beaches. Mammals found are beaches are primarily predators, and many are not native species; these include the red fox (*Vulpes vulpes*), feral cats, and skunks.

Mudflats are areas of little to no vegetation, are exposed during low tides, and are typically bordered by salt marsh vegetation on one side with channel waters on the other. Within the Elkhorn Slough, mudflats provide safe haul-out and roost sites for harbor seals and seabirds, as well as providing feeding areas for waders and shorebirds. Species diversity and abundance varies seasonally. Most shorebirds are visitors from distant breeding colonies, and this habitat is important for migrating birds to rest and feed on their way to breeding or wintering regions. Birds passing through include long-billed dowitchers, short-billed dowitchers, and dunlin. Some birds winter within the Slough, like willets, marbled godwits, black-bellied plovers, and western sandpipers (*Calidris mauri*). Only four birds (the snowy plover, killdeer (*Charadrius vociferous*), black-necked stilt (*Himantopus mexicanus*), and American avocet (*Recurvirostra americana*) are permanent year-round residents. Large wading birds like herons (*Ardeidae* ssp.) and egrets (*Ardeidae* ssp.) forage along the edges of mudflats.

Lower zones of tidal (salt and brackish) marshes are flooded by tidal waters, while upper zones are usually dry. These areas support wading birds but also provide breeding habitat for less-aquatic birds and mammals. Marshes are important to wading birds, especially during high tides when mudflats are unavailable. Birds foraging and roosting in these marshes include egrets, great blue herons, willets, marbled godwits, and long-billed curlews (*Numenius americanus*). Conversion of salt marshes to mudflats has caused a loss of roosting habitat, and likely aided the extirpation of the California clapper rail. Due to tidal influence, the majority of marshes within the Slough are now saline, but rainwater and creek flow mitigate the saltiness in the winter, and geese and ducks can be found visiting.

Salt ponds, located north of the slough entrance, were formed by levees and experience low tidal flow. These ponds are now managed by CDFG and public access is limited. Salt ponds provide valuable habitats for birds and serve as refuge when high tides inundate the rest of the Slough. They provide important feeding, roosting, and nesting habitat for a variety of shorebirds and seabirds. When flooded, the salt ponds are inaccessible to mammalian predators, thus offering safe haven for birds, the endangered California brown pelican (*Pelicanus occidentalis californicus*) in particular. They also provide important nesting area for the snowy plover. Efforts to manage salt ponds also benefit other nesting waders, such as black-necked stilts, American avocets, and killdeer. Nesting seabirds such as Caspian terns (*Hydroprogne caspia*), Forster's terns (*Sterna forsteri*), and western gulls (*Larus occidentalis*) use salt ponds as well. Dredged islands were constructed in the ESNERR using dredged bottom sediments in an effort to create habitat for birds. These islands are safe from disturbance and predation and are a popular roosting site for brown pelicans and double-crested cormorants and nesting site for Caspian terns. Unfortunately, some

predation has occurred, decimating multiple years' tern broods; researchers' efforts to deter predators were recently successful, but non-sustainable.

Terrestrial Habitats

Little research has been performed regarding fauna in terrestrial habitats within the Elkhorn Slough region. Extensive studies have only been performed on breeding birds (from 1988 to 1992), and an ongoing nest box project for cavity nesters. Most of the remaining knowledge has come from local naturalists and birding organizations.

The breeding bird survey was performed between 1988 and 1992 by a team of observers throughout Monterey County to determine the breeding distribution of birds. In 1992, artificial nest sites (nest boxes) were installed for cavity-nesting birds in oak woodlands. This project is still active. There are 151 active nesting boxes throughout the Reserve, where volunteers perform maintenance, determine species use and occupancy, band chicks, and record fledging success. Predominant species found within these boxes are the chestnut-backed chickadee (*Poecile rufescens*) and the oak titmouse (*Baeolophus inornatus*). The peak egg-laying period historically occurred the first two weeks of April. Other species using the boxes include the tree swallow and Bewick's wren (*Thryomanes bewickii*).

The predominant native terrestrial habitat within the Elkhorn Slough region is a mix of oakwood, savannah, and grassland. The oak canopy serves as foraging habitat insectivores like oak titmice, chestnut-backed chickadees, Hutton's vireos (*Vireo huttoni*), and bushtits (*Psaltriparus minimus*), as well as summer visitors such as orange-crowned warblers (*Vermivora celata*), and winter visitors like ruby-crowned kinglets (*Regulus calendula*), Townsend's warblers (*Setophaga townsendi*), and yellow-rumped warblers (*Setophaga coronata*). The release of acorns in the fall provides seasonal food for species like the western scrub-jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorous*), California quail (*Callipepla californica*), and western gray squirrel (*Sciurus griseus*). Species such as California towhees (*Melozone crissalis*), spotted towhees (*Pipilo maculatus*), and dark-eyed juncos (*Junco hyemalis*) forage for seeds and invertebrates. Species that feed in grasslands often use other habitats that provide more cover for resting and breeding. Common in grasslands are species such as the California ground squirrel (*Otospermophilus beecheyi*), California meadow mouse (*Microtus californicus*), California vole (*Microtus californicus*), valley pocket gopher (*Thomomys bottae*), mule deer (*Odocoileus hemonius*), and coyote (*Canis latrans*). Cattle grazing has substantially reduced the suitable nesting habitat historically provided by grassland habitats. Grasslands provide optimal hunting ground for predators such as owls (*Stigidae* ssp.), golden eagles (*Aquila chrysaetos*), white-tailed kites (*Elanus leucurus*), red-tailed hawks (*Buteo jamaicensis*), and American kestrels (*Falco sparverius*).

Also known as coastal scrub, chaparral habitat consists of dense stands of coyote bush, manzanita, black sage, ceanothus, and other shrubs. Mammals present in this habitat include the brush rabbit (*Sylvilagus bachmani*), which benefits from sufficient cover and an abundant source of food, and mule deer, benefiting from cover and food from the oaks.

Riparian woodlands can be found lining the streams and rivers of the Elkhorn Slough. These habitats are comprised of willows, alders, maples, and various water-loving understory species. These lush habitats

attract many bird and mammal species, especially in the dry summer and fall months. Nesting birds include the white-tailed kite, American robin (*Turdus migratorius*), Pacific-slope flycatcher (*Empidonax difficilis*), Wilson's warbler (*Cardellina pusilla*), common yellowthroat (*Geothlypis trichas*), black-headed grosbeak (*Pheucticus melanocephalus*), purple finch (*Haemorhous purpureus*), and Swainson's thrush (*Catharus ustulatus*). Mammalian inhabitants include the raccoon (*Procyon lotor*), opossum (*Didelphimorphia*), and dusky-footed woodrat (*Neotoma fuscipes*), all of which are nocturnal species requiring abundant water and cover. The gray fox (*Urocyon cinereoargenteus*) is also a part-time resident of this habitat.

Freshwater marshes and ponds are scarce within the Elkhorn Slough, but they provide a rich environment for many species, some of which are unique to this habitat. Freshwater ponds are typically surrounded by emergent cattails, bulrush, and rush, providing protected nesting habitat for terrestrial birds such as marsh wrens (*Cistothorus palustris*), common yellowthroats, and red-winged blackbirds (*Agelaius phoeniceus*). Barn swallows (*Hirundo rustica*), cliff swallows (*Petrochelidon pyrrhonota*), tree swallows (*Tachycineta bicolor*), and violet-green swallows (*Tachycineta thalassina*) can be found here in the summer. A number of bats are nocturnal hunters around freshwater marshes and ponds. Herons, egrets, soras (*Porzana carolina*), and Virginia rails (*Rallus limicola*) forage along shorelines. Waterfowl such as mallards (*Anas platyrhynchos*), northern pintails (*Anas acuta*), gadwalls (*Mareca Strepera*), cinnamon teals (*Anas cyanoptera*), green-winged teals (*Anas carolinensis*), and northern shovelers (*Anas clypeata*) spend their winters around freshwater ponds and depart in the spring.

Eucalyptus forest are pure strands of this non-native species and are found throughout the Elkhorn Slough watershed. This species prevents most other trees and understory plant species from becoming established. Stands of eucalyptus are thought to support less wildlife than other wooded areas in the watershed. In the winter, flocks of yellow-rumped warblers can be found feeding within the canopy. In the spring, red-tailed hawks often build their nests in the upper branches.

Coastal dunes are a harsh environment, deficient of freshwater, and continuously exposed to winds and salt spray. Sparse vegetation supports a few species of birds and mammals. The brush rabbit, western harvest mouse (*Reithrodontomys megalotis*), California ground squirrel, and California mole (*Scapanus latimanus*) are well-adapted to this environment. Additionally, several bird species are present, such as the white-crowned sparrow (*Zonotrichia leucophrys*). Avian predators such as the loggerhead shrike (*Lanius ludovicianus*) and Say's phoebe (*Sayornis saya*) can be seen on high perches or posts. Winter brings water pipits as well.

Agricultural and residential lands support large populations of some birds and mammals, in spite of intense human activities. Pastures and row crops cover a large portion of the Slough watershed. Large flocks of red-winged blackbirds, tricolored blackbirds (*Agelaius tricolor*), and Brewer's blackbirds (*Euphagus cyanocephalus*) feed on grain found near livestock and on invertebrates in newly-tilled fields. Non-native European starlings (*Sturnus vulgaris*) and parasitic brown-headed cowbirds (*Molothrus ater*) are also frequently found in this habitat. Sparrows, finches, and swallows use this land to search for insects (A Profile of Elkhorn Slough).

4.2.5 Threatened and Endangered Species

ESNERR provides habitat for hundreds of bird, marine mammal, and fish species, including some that are federally listed as threatened or endangered. Hundreds of species of marine invertebrates and plants in turn, nurture these species. There are 19 federally listed species within the existing NERR boundary and proposed expansion parcels. Threatened and endangered species that are known to occur in the proposed boundary expansion parcels are listed in Table 4.1. Short descriptions of these species follow the table.

Table 4.1. Listed Species Potentially Located in the Boundary Change Parcels

Species \ Parcel	Garcia (129211001)	Howell Life Estate (131111015) and Howell (131111017)	Springer (131081002)	Wells (131081036)	Tabor-Beck (131081022)	Jazwin (131081033)	Minhoto (133181004)	Moro Cojo (133 172 011)
Mammals								
Southern Sea Otter (*Enhydra lustris nereis*) - T						x	x	
Birds								
California Clapper rail (*Rallus longirostris obsoletus*) – E								
California Condor (*Gymnogyps californianus*) – E	x	x	x	x	x	x	x	x
California Least Tern (*Sterna antillarum browni*) – E							x	
Least Bell's Vireo (*Vireo bellii pusillus*) – E	x	x	x					
Marbeled Murrelet (*Brachyramphus marmoratus*) – T							x	
Southwestern Willow Flycatcher (*Empidonax traillii extimus*) – E	x	x	x	x	x	x	x	
Western Snowy Plover (*Charadrius nivosus nivosus*) – T							x	
Amphibians								
California Red-legged Frog (*Rana draytonii*) - T	x	x	x	x	x	x	x	x
California Tiger Salamander (*Ambystoma californiense*) – T	x	x	x	x	x	x	x	x
Santa Cruz Long-toed Salamander (*Ambystoma macrodactylum croceum*) – E	x	x	x	x	x	x	x	x
Crustaceans								
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*) – T						x		
Flowering Plants								
Marsh Sandwort (*Arenaria* paludicola) – E	x	x	x	x	x	x	x	x
Menzie's Wallflower (*Erysimum menziesii*) – E							x	
Monterey Gilia (*Gilia tenuiflora ssp. arenaria*) – E							x	
Monterey Spineflower (*Chorizanthe pungens var. pungens*) – T	x	x	x	x	x	x	x	x
Santa Cruz Tarplant (*Holocarpha macradenia*) – T	x	x	x	x	x	x	x	x
Yadon's Piperia (*Piperia yadonii*) – E	x	x	x	x	x	x		
Fishes								
Tidewater Goby (*Eucyclogobius newberryi*) – E							x	

Source: https://ecos.fws.gov/ipac/project/

Mammals

Southern Sea Otter - Southern sea otters (*Enhydra lutris nereis*), also known as California sea otters, were listed as threatened in 1977 under the Endangered Species Act. Southern sea otters are among the smallest of marine mammals, with adult females and males averaging 46 and 64 pounds, respectively. Because of their consumption of large quantities of marine invertebrates, sea otters play a significant role in nearshore marine ecosystems of the North Pacific Ocean, enhancing not only kelp forests but also seagrass beds (Ventura USFWS 2018). At ESNERR, Southern sea otters can be found in open water or hauled out on the mudflats in the main slough channel, from Moss Landing harbor to Hudson Landing, but are most common in the North harbor area. The Reserve will likely play an important role in the recovery of the sea otter population. According to a 2010 Technical Report by Reserve researchers, the slough and the adjacent Moss Landing Harbor area host roughly 5% of the statewide population of sea otters (ESNERRs Otter Research and Monitoring 2013). ESNERR staff have confirmed that this species is present within the Minhoto parcel and is likely to be found in regions along the main channel of the Slough. While there is potential habitat within the Jazwin parcel, the species has been confirmed as absent.

Birds

California Clapper Rail - Populations of the California clapper rail (*Rallus longirostris obsoletus*) now exist almost exclusively in the marshes of the San Francisco estuary. Kirby Park area, located on Elkhorn Road just north of the ESNERR, was home to the clapper rail, but was lost to non-native red foxes in the 1980s (Birding Around ESNERR 2018). California clapper rails inhabit a range of salt and brackish water marshes. Clapper rails use a network of small tidal sloughs for foraging and quick escape. They construct nests near them (within 10 meters), canopied with either pickleweed or cordgrass, sometimes gum-plant, salt grass, or drift materials. The USFWS developed a recovery plan for the California clapper rail in 1984 (EPA 2010). NERR staff have confirmed that this species is locally extinct, having been most recently recorded in 1972.

California Condor - California condors (*Gymnogyps californianus*) are huge and unmistakable birds with black with white wing-linings and silvery panel on upper secondaries. Since 1992, when the USFWS began reintroducing captive-bred condors to the wild, the USFWS, and its public and private partners have grown the population to more than 440 birds. Currently, there are about 160 California condors flying free in Central and Southern California. By 2008, the Recovery Program reached an important milestone: for the first time since the program began, more California condors were flying free in the wild than in captivity. ESNERR staff have confirmed that species does not occur within the ESNERR or any parcels proposed for incorporation. The nearest sightings occurred in the Carmel/Big Sur area and San Benito County.

California Least Tern - The Least tern (*Sterna antillarum browni*) is the smallest in the Laridae family, measuring 21-24 cm in length. The Least tern nests in colonies on barren or sparsely vegetated areas. Preferred habitats include open sandy beaches, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, and drainage systems. It is found mainly in California, in wetland areas

(FWS 2009). California least tern have been formerly documented to be nesting in the Reserve watershed (2007-2011 Site Management Plan).

Least Bell's Vireo - Least Bell's vireos (*Vireo bellii pusillus*) are small insectivorous birds. They are only 11.5-12.5 centimeters long and have short rounded wings and short, straight bills. The species' historical range included California. They are neotropical migrants; spending winter in Baja California, Mexico and breeding in Southern California. They have been documented in the southern ESNERR region (Site Profile 2002). According to the management plan, this species can be found in small number within the Reserve during spring (occasionally) and summer (rarely) months. Site staff confirm that this species may be present within the Minhoto parcel, where it would find foraging habitat within aquatic areas, but no breeding habitat is present.

Marbled Murrelet - The marbled murrelet (*Brachyramphus marmoratus*) is a small, chubby seabird that has a very short neck. During the breeding season it has dark brown to blackish upperparts and a white belly and throat that are greatly mottled. During the winter the upperparts become grey, dark marks form on the sides of the breast, and a white ring develops around the eye. The species historical range included Alaska, California, Oregon and Washington (ECOS 2017). The Marbled murrelet is not mentioned in the Site Profile or Management Plan. Site staff state that there have been rare sightings in Elkhorn waters, but there is no breeding habitat onsite, so this species is unlikely. The Minhoto parcel is the only incorporation parcel that has potential suitable habitat.

Southwestern Willow Flycatcher - Southwestern willow flycatcher (*Empidonax traillii extimus*) has a grayish-green back and wings, whitish throat, light gray-olive breast, and pale yellowish belly. The southwestern willow flycatcher breeds in Arizona, New Mexico, and southern California, plus portions of southern Nevada and Utah, and southwest Colorado. It winters in the rain forests of Mexico, Central America and northern South America. This species of flycatcher is not mentioned in the Site Profile or Management Plan. The species lists for each incorporation parcel state that suitable habitat may be found, but site staff state that there have not been sightings of this bird within the Reserve boundary.

Western Snowy Plover - The Pacific coast population of the western snowy plover (*Charadrius nivosus nivosus*) is defined as those individuals that nest adjacent to tidal waters of the Pacific Ocean, and includes all nesting birds on the mainland coast, peninsulas, offshore islands, adjacent bays, estuaries, and coastal rivers. The current known breeding range of this population extends from Washington to Mexico, including California (Arcata USFWS 2018). According to one study, the main nesting areas for the western snowy plover are in Monterey and Santa Cruz counties and includes the beaches of Monterey Bay, former salt ponds in the Reserve on Moss Landing Wildlife Area parcels, and pocket beaches in northern Santa Cruz County (Point Blue Conservation 2017). This species is confirmed as present on sandy beaches in the Management Plan. ESNERR staff confirm that this species may occasionally forage in intertidal areas, but there is no nesting on site. Official species lists for the proposed incorporation add that suitable habitat is only found within the Minhoto parcel.

Amphibians

California Red-legged Frog - The California red-legged frog (*Rana draytonii*) is the largest native frog in the western U.S., ranging from 1.5 to 5 inches long (4 to 13 cm). Adults have mostly red abdomens and hind legs, and the back has small black flecks and larger irregular dark blotches. Their habitat consists of perennial freshwater pools, streams, and ponds. These sites could have dense shrubby riparian or emergent vegetation, such as cattails, tules, or overhanging willows or could be ponds without any apparent vegetative cover (i.e., stock ponds). California red-legged frogs are known to occur in in some Reserve freshwater habitats (Management Plan). While official species lists state that all 8 incorporation parcels have habitat for this species, there is very little freshwater throughout the reserve. Since this is a mobile species though, NERR staff state there is a possibility of this species occurring throughout the Reserve and incorporation parcels.

California Red-legged Frog (*Rana draytonii)* – Credit: Andrea Woolfolk, ESNERR

California Tiger Salamander - The California tiger salamander (*Ambystoma californiense*) is large and stocky with a broad, rounded snout and small eyes with black irises protruding from its head. The California tiger salamander's habitat is restricted to grassland and low foothills with vernal pools or ponds necessary for breeding. Most of its life is spent underground, in burrows made by squirrels or other burrowing mammals. California tiger salamanders are also reported to occur in the seasonal swales of the ESNERR (ESNERR Tidal Marsh Restoration Project 2014). This species is confirmed as present in the Management Plan. Additionally, since it is mobile, it may be present within any of the incorporation parcels.

Santa Cruz Long-toed Salamander - The Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*) is one of the rarest vertebrates in North America and is endemic to California, inhabiting a very limited range around the coast of Monterey Bay in southern Santa Cruz County and the northern edge of Monterey County. They primarily occupy freshwater wetlands and adjacent willow and oak woodlands (USFWS 1999). Breeding SCLTS have been documented in an ESNERR pond (ESNERR unpublished data). This species is confirmed as present in the Management Plan. Additionally, since it is mobile, it may be present within any of the incorporation parcels.

Crustaceans

Vernal Pool Fairy Shrimp - The vernal pool fairy shrimp (*Branchinecta lynchi*) varies in size, from 11 to 25 mm in length, and resembles the Colorado fairy shrimp. Males are identified by several mounds on the second antennae, while females are identified by a short, pyriform brood pouch. As indicated by the name, this species lives in vernal pools. It is at risk due to the fragmentation of these vernal pools, as a result of human development and diversion of freshwater for agricultural use. Reserve staff state that this species is not present within the existing boundary or within any of the proposed incorporation parcels.

Plants

Marsh Sandwort - The marsh sandwort, *Arenaria paludicola*, was federally-listed as endangered in 1993. Ten populations of *Arenaria paludicola* were historically documented along the Pacific coast from central-western Washington to southern California. This species is not identified within the Site Profile or the Management Plan, and Reserve staff confirm it is absent in the existing NERR boundary and all incorporation parcels.

Menzies' Wallflower - Menzies' wallflower (*Erysimum menziesii*) is a perennial plant, but it flowers and produces fruit only once during its lifetime and then dies. Menzies' wallflower typically blooms from March through April (ESNERR 2015). ESNERR staff confirm that this species is not present within the current NERR boundary or within any of the proposed expansion parcels.

Monterey Gilia - The Monterey gilia (*Gilia tenuiflora ssp. Arenaria*) is an erect short rosette-forming, annual herb, usually less than 6.7 in (17 cm) tall. Monterey gilia grows in sandy soils of dune scrub, coastal sage scrub, and maritime chaparral in the coastal dunes of Monterey County. It is distributed in discontinuous populations from Spanish Bay on the Monterey Peninsula, northward to Moss Landing and

the ESNERR area (ESCTP 2015). Despite potential habitat, NERR staff confirm that this species is not present within the current NERR boundary or within any of the proposed expansion parcels.

Monterey Spineflower - *Chorizanthe pungens*, a dicot, is an annual herb that is native to California, is endemic (limited) to California. Monterey spineflower is closely associated with ESNERR's maritime chaparral. It grows mainly in coastal habitat and that of the hills and mountains overlooking the coastline. There are two varieties of this species: var. *pungens* is the more common while var. *hartwegiana* is known only from the Santa Cruz Mountains north of Santa Cruz. Both varieties have been reported to occur in ESNERR region (ESNERR 2016), but site staff confirm that this species is unlikely to be found within the Reserve or incorporation parcels.

Santa Cruz Tarplant - Santa Cruz tarplant (*Holocarpha macradenia*) is an herbaceous annual plant that grows between ten to fifty centimeters tall and has yellow, daisy-like flower heads. It is found in coastal prairie habitat along California's central coast, mostly flanking the northern Monterey Bay, and typically blooms from June to November. This species is extant only in central California in Monterey and Santa Cruz counties, including ESNERR area (ESNERR 2007). NERR staff state that this species is present within the region but is unlikely within the Reserve or incorporation parcels.

Yadon's Piperia - Yadon's piperia or Yadon's rein orchid (*Piperia yadonii*), is an endangered orchid endemic to a narrow range of coastal habitat in northern Monterey County, California. It is confined to three habitats: 1) maritime chaparral, with dwarfed Hooker's manzanita; 2) Monterey pine forest, sometimes with Gowen cypress; and 3) Monterey cypress forest. Yadon's piperia is endemic to California in northern Monterey County, in the Prunedale Hills on the Monterey Peninsula, with the isolated southernmost population occurring on Rocky Creek Ridge (Cushing Mountain) including the ESNERR region. The flowering period for Yadon's piperia is from June to August (ESNERR 2006). NERR staff state that this species is present within the region but is unlikely within the Reserve or incorporation parcels.

Fish

Tidewater Goby - The tidewater goby (*Eucyclogobius newberryi*) is a small, elongate, grey-brown fish rarely exceeding 50 millimeters (2 inches) standard length. The tidewater goby, a fish species endemic to California, is found primarily in waters of coastal lagoons, estuaries, and marshes. The species is benthic in nature, living at the bottom of shallow bodies of water. Its habitat is characterized by brackish (somewhat salty) water in shallow lagoons and in lower stream reaches where the water is fairly still but not stagnant. Tidewater gobies are known to occur in Moro Cojo Slough to the south and Struve Pond to the north of ESNERR but are not known to occur in the Reserve due to high tidal flows. However, this species may occasionally disperse into ESNERR and the smaller channels in the project site in search of suitable habitat. Also, restoration activities that reduce tidal prism may facilitate occupation of ESNERR habitats by this species (ESNERR Tidal Marsh Restoration Project 2014). NERR staff state that due to high tidal flows, this species is not known to occur within the boundary, but it is possible that this species may occasionally disperse into smaller channels within the Slough in search of suitable habitat. However, it is known to occur within the Moro Cojo Slough.

4.3 Cultural and Historic Resources

4.3.1 Cultural History

Humans have occupied the ESNERR area for at least 8,000 years, gathering resources from local marine, estuarine, freshwater, grassland, shrub and woodland habitats, which provided shellfish, fish, game, grass seeds, plant fibers, forbs and acorns as food and materials for cooking, clothes, and homes. Biological resources in the area provided year-round support for the community. In the 1700s and 1800s, the community around the Reserve area was known as Kalenduruc. Following Spanish takeover, the locals were divided and sent to two Spanish missions (Carmel and San Juan Bautista) between 1783 and 1806. After European contact, the Ohlone society was severely disrupted by missionization, disease, and displacement. Today, the Ohlone still have presence in the Monterey Bay Area and are highly interested in their historic and prehistoric past (ESNERR Tidal Marsh Restoration Project 2014).

4.3.2 Public Use

The Monterey Bay is a well-known destination for visitors from around the world. The ESNERR lies at the center of this activity and attracts thousands of visitors who come to kayak the slough, view wildlife, or enjoy the ocean. Approximately 40,000 people a year visit the Reserve to walk the trails, enjoy the visitor center, or participate in educational activities.

The Reserve property was used initially for cattle grazing in the 1800s. Some of the oak woodlands were cleared for firewood production and to improve the rangeland properties of the land. In 1902, the Empire Gun Club was established on what is now called Hummingbird Island, which is part of the NERR found in the main channel of the Slough north of South Marsh. Freshwater ponds were created in tidal marshes and managed for waterfowl hunting. The Empire Gun Club house was demolished in the early 1980s. In 1905 J. Henry Meyer, a wealthy Bay Area resident, purchased the lands just uphill of the Empire Gun Club, as a private retreat and hunting club. In 1915, Mr. Meyer introduced cattle to the property, and by the 1920s the property was managed as a dairy. In the 1940s, much of the salt marsh east of the railroad tracks was reclaimed and managed as pasture. The Elkhorn Dairy stayed in operation until 1972, with cattle remaining on the property until 1982 through lease arrangements. Most of the dairy buildings and infrastructure were demolished in the 1980s but two barns and three residences were spared and remain in use on the Reserve.

Major transportation corridors pass through the ESNERR area. The main north-south coastal highway (Highway 1) in California crosses the Slough in Moss Landing. Over 60,000 vehicles per day use this road. The Southern Pacific Railroad was built through the marshlands of the Reserve in 1872 and remains a major rail corridor for transportation of goods and passengers. The popular Coast Starlight, which traverses the west coast of the U.S., runs on this line.

4.3.4 Socioeconomic Conditions

The agricultural lands on the Monterey Bay Coast are among the world's most productive agricultural areas, producing billions of dollars of agricultural goods on an annual basis. Monterey County has the

third largest agricultural economy in the State of California. In 2010, agricultural jobs accounted for approximately 27 percent of all occupations in the county, followed by government and tourism (California Employment Development Department 2010 statistics). The neighboring community of Watsonville in Santa Cruz County also has a significant percentage (26 percent) of occupations in agriculture.

The Reserve is one of the largest employment providers in the ESNERR region. The nearby community of Moss Landing is engaged in several businesses for many visitors exploring the Reserve. A thriving ecotourism economy has developed with the ESNERR being the center of activity. The Moss Landing Harbor's economy thrives from the business brought by the recreational and commercial vessels. Both commercial and recreational fishermen access Monterey Bay from the Moss Landing Harbor. In addition, sandy and muddy bottoms of ESNERR contribute significantly to the production of commercially important fish species such as speckled sanddab and English sole (Site Profile 2002).

ESNERR is committed to providing teachers and students educational and research opportunities via their workshops and other programs. Students in the Reserve's K-12 school program come from diverse socio-economic and cultural backgrounds. Engaging these students and teachers with Reserve programs generates revenue through educational tours, seminars, etc.

The communities immediately surrounding the Reserve are predominantly Hispanic. Population data of Monterey County indicates that about 58.8 percent of the population is of Hispanic origin. In the data collected from 2013-2017, median household income of the Monterey County was $63,249. Approximately 11 percent of the population is indicated to be living in poverty (US Census 2018).

Chapter 5 ENVIRONMENTAL CONSEQUENCES

This chapter evaluates the anticipated environmental impacts resulting from the implementation of both alternatives. The potential impacts would be applicable to the affected environment described in Chapter 4. Also discussed are potential cumulative impacts; unavoidable adverse impacts; the relationship between short-term uses and long-term productivity; and the irreversible and irretrievable commitment of resources. As described in Chapter 3, the alternatives are exclusively spatial in nature; that is, only alternatives related to the potential expansion of the Reserve boundary are considered, and each of the alternatives assumes that the current regulatory regime in place in the existing Reserve would extend to areas encompassed in any expanded boundaries.

The criteria used to determine whether an effect (impact) of a proposed action is or is not "significant" are based on Council on Environmental Quality (CEQ) Guidance and NOAA standards and practice, including the "*Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities*: Companion Manual for NOAA Administrative Order 216-6A" (NOAA, January 31, 2017). The term "effects" (which is synonymous with "impacts" in the Council on Environmental Quality [CEQ] regulations [40 CFR 1508.8]) includes ecological, aesthetic, historic, cultural, economic, social, or public health, whether direct, indirect, or cumulative. Types of impacts describe the classification of the impact either as beneficial or adverse, direct or indirect. The terms "impact" and "effect" are used interchangeably throughout this EA.

• Beneficial: An impact that would result in a positive change to the resource when compared to the existing conditions.
• Adverse: An impact that causes an unfavorable result to the resource when compared to the existing condition.
• Direct: Impacts that would occur as a result of the proposed action at the same time and place of implementation (40 CFR 1508.8).
• Indirect: Impacts that would occur as a result of the proposed action but later in time or farther in distance, but still reasonably foreseeable from the action (40 CFR 1508.8).
• Cumulative Impact: A known or potential impact resulting from the incremental effect of the proposed action added to other past, present or reasonably foreseeable future actions regardless of what agency or person undertakes such other actions (40 CFR 1508.7).

Assessing Impacts using CEQ Criteria

The impacts of the alternatives are assessed using the CEQ definition of "significantly" (40 CFR 1508.27), which requires consideration of context, geographic extent and intensity.
Context: This means that the significance of any action may be analyzed within the appropriate context, such as society as a whole (human, national), the affected region, or the locality. Both short-term and long-term effects are relevant which is often characterized as duration.

Duration:
• Short-term: impacts generally last only during the initiation and implementation of the project, and the resources resume their pre-project conditions following the implementation of the project.
• Long-term: impacts last beyond the initiation and implementation of the project, and the resources may not resume their pre-project conditions for a longer period.

Geographic Extent: NERR designation can cause impacts at a variety of geographic scales. For the purposes of this analysis, impacts are assessed in two ways:
• Localized: Site-specific and generally limited to the area within and the immediate surroundings of the proposed boundaries.
• Beyond Proposed Boundaries: Unconfined or unrestricted to the proposed boundaries. These impacts may extend only in the immediate vicinity of a proposed boundary or throughout the region.

Intensity: This refers to the severity of the impact. To determine the proposed action's anticipated intensity or magnitude, NOAA qualitatively assessed the degree to which the alternatives would likely impact a particular resource. The intensity of a known or potential impact is defined on a spectrum ranging from no impacts to major impacts. The potential impacts could be either beneficial or adverse for a particular resource. This EA considers the relative intensity of both adverse and beneficial impacts. The intent of NOAA's proposed action is to provide beneficial impacts to the habitat. Impact intensity descriptions are defined as follows.
• Minor impacts might be perceptible but, in their context, are not amenable to measurement and do not alter the overall, fundamental condition of the resource from status quo. Such impacts generally would be isolated to that resource alone and would not have any meaningful influence on other resource categories. Generally, minor impacts are those that, in their context and due to their low level of intensity, do not have the potential to meet the considerations of 'significance' set forth in CEQ regulations (40 CFR 1508.27) and NOAA policy (NAO 216-6A).
• Moderate impacts to these resources are more perceptible and, typically, more amenable to quantification or measurement and would likely alter the overall, fundamental condition of the resource from status quo. These may be so impactful as to meaningfully alter or affect another resource category in the proposed boundary. Generally, moderate impacts are those that, in their context and due to their lower level of intensity, do not have the potential to meet the considerations of 'significance' set forth in CEQ regulations (40 CFR 1508.27) and NOAA policy (NAO 216-6A).
• Major impacts to these resource categories are obvious, can be quantified or measured, and result in substantial changes to the fundamental condition of the resource from status quo. Such impacts may be so severe or profound as to substantially alter or affect more than one other resource category in the proposed boundary. Generally, major impacts are those that in their context and due to their intensity have the potential to meet the considerations of 'significance' set forth in CEQ regulations (40 CFR 1508.27) and NOAA policy (NAO 216-6A and the NOAA NEPA Companion Manual).

5.1 Alternative 1 - No Action

The No Action Alternative provides a baseline against which environmental consequences of the Reserve expansion alternative (Preferred Alternative) may be compared. Under the No Action Alternative, the ESNERR management boundary would remain the same as delineated in the Elkhorn Slough Final EIS approved in 1979 and the ESNERR Management Plan, 2007- 2011. As described in Chapter 1, under Section 315 of CZMA, National Estuarine Research Reserve System empowers NOAA to designate different areas into their System for long-term research; and use as a base for estuarine education and interpretation programs. The System also provides a framework through which management approaches, research results, and techniques for estuarine education and interpretation can be shared with other

programs. Under the No Action Alternative, the integrated resource management framework of NERRS would not be extended in the expansion parcels. The proposed expansion parcels would continue to be managed by the CDFW and would not receive additional resource protection of NERRS. No direct changes to physical, biological, cultural and socioeconomic environment are expected to result from the No Action Alternative. NERRS regulations require that Reserves have adequate state control over lands within their boundary. Under the No Action alternative, the 13.98-acre feedlot would not be removed from the Reserve boundary, and the Reserve would not be consistent with the NERRS regulations because the Reserve would not have adequate state control over the property. However, the current impacts of the Reserve on the feedlot would not be expected to change under the No Action alternative. . The boundary expansion parcels would not realize long term benefits which are possible via Reserve's research, monitoring and environmental programs. Absence of Reserve's multistep environmental stewardship programs might result in ecological degradation of the proposed boundary expansion parcels in the long term. In sum, implementation of the No Action Alternative would likely lead to minor or moderate beneficial impacts from continued management of the areas in the current Reserve boundary, but the absence of Reserve protection and management in the expansion parcels would potentially lead to minor to moderate adverse impacts from ecological degradation. Finally, the No Action Alternative would not meet the purpose and need.

5. 2 Alternative 2- Preferred Alternative

The Preferred Alternative would add nine parcels to the existing management boundary of ESNERR and remove from the existing boundary a 13.98-acre portion of land that contains a non-conforming use. The nine new parcels, acquired since 2007, are all owned by the State of California and are adjacent to the Reserve's current management boundary. Five of the nine parcels were included in the Reserve's original acquisition boundary per the 1979 FEIS: Howell, Springer, Wells, Jazwin and portions of Minhoto. The others (Garcia, Howell Life Estate, Tabor-Beck, upland portions of Minhoto, and Moro Cojo) were not included in the original boundary. In addition, the Preferred Alternative includes removal of a 13.98-acre portion of the Seal Bend property from the Reserve's boundary because the CDFW no longer owns this portion (feedlot). The Preferred Alternative would enable the ESNERR staff to protect the Reserve environment and adjacent watershed per the Reserve's approved management plan and as stated in applicable Federal and State laws and regulations. The expansion of the boundary would provide a wider range of protection and enhance opportunities for research, monitoring, and education for the Reserve and its vicinity. The proposed expansion and removal of a non-conforming use parcel would provide a mechanism for more coordinated and integrated ecosystem management that would help the Reserve attain its mission of conserving natural biodiversity and cultural resources in the area.

The Preferred Alternative has little to no potential to have a significant effect on the human environment. The Reserve's stewardship activities protect and restore the varied natural resources at ESNERR. Anthropogenic activities heavily modified, and in many cases degraded, habitats in the Reserve watershed since the late 19th century. Resource protection at ESNERR during the evaluation period involved mitigating the impacts of invasive species through detection and response, quantifying habitats and species at the Reserve through inventorying, and preserving ecological function through existing engineering controls and management. Restoration efforts by the ESNERR attempt to recover portions of the lost aspects of local biodiversity and natural processes. The Reserve's stewardship goals include

acquisition of new properties, which would increase the portfolio of lands requiring protection and restoration (2007-2011 Site Management Plan). With the proposed Reserve designation of the expansion parcels, education and public outreach programs associated with ESNERR environmental stewardship would be extended to the boundary change parcels. This would lead to the beneficial impacts on the overall quality of the natural and human environment in the ESNERR region. With the Preferred Alternative, the Reserve would be able to maintain its marine and terrestrial habitats in the ESNERR boundary change parcels as one ecological unit. This would help the Reserve in the maintenance and protection of the habitats that are functionally important to one or more managed species in its existing ESNERR area and in the boundary change areas.

5.2.1 Physical Environment

The expansion of the ESNERR site is not expected to have any significant impact on any physical resource; including air quality, wetlands, hydrology and hydro-geography, and geology and substrate. With respect to air quality, the Preferred Alternative would have no effect on the current state of emissions and would be consistent with applicable Monterey Bay Unified Air Pollution Control District guidelines. Furthermore, the proposed action involves extension of conservation and enhancement of naturally vegetated areas, which would result in a long-term air quality benefit. Exhaust from vessels within Monterey Bay are expected to continue to be released inside the Reserve's expansion boundaries under existing conditions. Direct, long-term, localized minor impacts to air quality could result from any increase in vessel and automobile traffic related to Reserve activities. However, the impact would be less than significant due to its expected low level of intensity and the minor and localized nature of potential traffic increases.

The proposed boundary change would result in additional research, monitoring, and restoration of the wetland habitats existing in the expansion parcels; resulting in the direct short-term and long-term benefit to the wetlands and their supporting communities. One focus of the Reserve in their land acquisition program is to protect the tidal wetlands of ESNERR and their immediately adjacent lands. Reserve's staff continues to lead a large, collaborative effort, the ESNERR Tidal Wetland Project (TWP), with the assistance of many partners to develop and implement specific recommendations to conserve and restore estuarine habitats. Therefore, with the Preferred Alternative, the Reserve's wetland conservation measures would be extended to the expansion parcels. Some freshwater habitats with wetlands do remain in the watershed, but most face at least some level of ongoing threat. In many cases, ponds, marshes and meadows are affected by excessive agricultural runoff which results in sediment accumulation, increased turbidity, and introduction of other pollutants. In order to protect and restore the watershed's key wetlands, the Reserve explores opportunities for watershed partnerships, outreach and conducts research to improve management strategies for local wetlands. Adding the expansion parcels would not have an overall adverse impact on sediments and added turbidity; and additional sediment accumulation may be negligible. Further, the Reserve's strategic stewardship programs to protect the wetlands ecosystems would be extended to the expansion parcels with the Preferred Alternative, resulting in an overall moderate benefit to the wetland habitats.

The Reserve maintains man-made structures and implements management regimes that are instrumental in the upkeep of habitat including erosion control, debris removal, removal of weeds etc. Agriculture and

pesticide run off is widely recognized as an important issue in the expansion parcels, which were previously used for farming, grazing, and agriculture. However, ESNERR conducts several educational programs and partnerships to explore this issue including: sediment and nutrients from agricultural fields adjacent to ESNERR, nearshore waters, and other regional wetlands, sediment and nutrients as a non-point source pollution that is associated with intense livestock grazing, and pesticide contamination of ESNERR, nearshore waters, and other regional wetlands. These programs and partnerships would be extended to the expansion parcels with the Preferred Alternative. In addition, the Reserve has fully implemented the NERR system-wide monitoring program (SWMP) for measuring water quality, nutrients, and meteorological data at its four stations. A recent study (Gee et al. 2010) showed that land use changes incorporated on Reserve Foundation lands had a locally significant positive impact on water quality. This included taking lands out of crop and livestock farming, preventing lands from being developed, and incorporating buffer areas between farms, future development, and wetlands. Therefore, incorporation of additional parcels in the NERR may result in the reduced nutrient and pesticide inputs in the Slough channels. The application of current Reserve's policy of water quality research and monitoring is anticipated to provide both direct and indirect, long-term, localized minor benefits to water resources in the expansion areas. These benefits would be both localized and extending beyond the proposed boundaries.

The geological and substrate resources encompassed by the Preferred Alternative are less vulnerable to disruptions than are the biogenic features. Any activities that could modify deposition and natural habitats in the expansion parcels would be discouraged under the NERR management. Therefore, due to the low level of intensity of this category there would be less than significant impact on geology and substrate of the Elkhorn Slough region under Preferred Alternative. The overall benefit achieved by the research, education, and recreational programs that are promoted by designation and management in the expanded Reserve areas would overweigh any localized minor impact to the physical resources. NOAA anticipates that the overall benefits of Reserve management would lead to net minor and beneficial impacts on physical resources.

Through the No Action Alternative, the physical resources present in the proposed addition would not be protected as described. The potential for development does exist, which could lead indirectly to an increase of emissions as well as habitat degradation. Additionally, the Reserve would not have access to the expanded area to perform research, monitoring, and habitat restoration. As such, the Preferred Alternative would likely have minor beneficial impacts on physical resources when compared to the anticipated impacts of the No Action Alternative.

5.2.2 Biological Environment

The primary anticipated environmental consequences of the proposed boundary change on biological resources would result from the application of the current Reserve's mission of environmental stewardship in the expansion parcels. No adverse impact on any biological resources is expected due to the Preferred Alternative. Most of the parcels that are proposed to be included in the Reserve's boundary are currently being used for agriculture, except the Jazwin property. The expansion of the ESNERR's boundary would allow for more efficient management and reduce or eliminate confusion over different management policies within areas surrounding the Reserve. It would also broaden the scope of

educational and scientific goals of the Reserve. Small-scale demolition may be necessary for specific parcels in the future; however, NOAA anticipates retaining an approval role for such proposed projects, and additional NEPA and other environmental compliance analysis, as necessary, will be completed when those projects are proposed. As indicated in Table 3.1, potential future use of the expansion parcels is listed below:

- Garcia – Parcel would be used to protect, restore and study maritime chaparral habitat, but the parcel includes just 1 acre of chaparral. It would also include protection of intact coastal prairie, coastal scrub, and oak woodland. Initial work included the removal of agricultural debris from grasslands and woodlands.
- Howell Life Estate – This parcel would include the removal of a deteriorating home.
- Howell – Parcel would be used to protect and restore oak woodland and, in future years, to possibly remove exotic eucalyptus.
- Springer – Parcel would be used for grazing research, oak savanna restoration, and expanding trails for the public access related to Reserve's educational and recreational programs.
- Wells – Parcel would be used for expanding grazing research programs and monitoring native grass species. Eucalyptus may be removed.
- Tabor Beck – Parcel would be used for habitat protection.
- Jazwin – Parcel would include the demolition of two deteriorating houses and final trash removal. It would be managed for native habitat.
- Minhoto – Parcel would be used for wetland and grassland restoration.

Therefore, the inclusion of above referenced adjacent parcels within the Reserve's boundary would increase protection for the upland, aquatic, and wetland species with increased opportunities for research and monitoring. These parcels would provide additional land that could be developed to extend the Reserve's mission and act as buffers to protect the core areas of the ESNERR. In addition, there would be no expected adverse impacts following the removal of 13.98 acres of Seal Bend property from the ESNERR boundary. The current land use of this property as a feedlot would remain unchanged, but not under the administrative management of ESNERR. For these reasons, minor beneficial impacts to biological resources would be expected from the Preferred Alternative.

Selection of the No Action Alternative would limit the reach of ESNERR's research and monitoring to within the current boundary. Additionally, the proposed addition parcels would not provide important buffer area surrounding the core areas of the NERR, leaving it susceptible to habitat degradation. Accordingly, the Preferred Alternative would likely have minor beneficial impacts on biological resources when compared to the No Action Alternative.

5.2.3 Wildlife and Marine Resources

The expansion of ESNERR administrative boundaries is not expected to have any adverse impact on existing wildlife and marine resources. The Reserve's scientists complement the monitoring they coordinate with short-term, applied research projects aimed at better understanding threats to coastal ecosystems and strategies for diminishing them. The focus of such applied research projects stems directly from the Reserve's priorities for conservation and restoration in the watershed. Current Reserve

policy encourages restrictions on discharging or depositing materials or other matter; alteration of the seabed and marsh areas; introduction of invasive species; injuring or taking or attempting to injure or take Reserve's resources; possessing or using explosives or releasing electrical charges; and feeding fish. As a result, expanded Reserve areas could experience reduced habitat destruction and impacts to the vulnerable fish and terrestrial species (Title 14 of the California Administrative Code, Chapter 11. Ecological Reserves).

Recently, Reserve research indicated that populations of several native species in the ESNERR watershed are severely declining. ESNERR is currently conducting restoration experiments for the native Olympia oyster (*Ostrea lurida*), a marine bivalve mollusk, to evaluate oyster colony restoration through artificial reef techniques.

While ESNERR researchers use the Reserve as its platform, many projects generate data and findings applicable to other scientists and habitat management decision makers outside the ESNERR watershed. Therefore, boundary change would lead to improved habitat for native and protected species within the Reserve and could lead to additional research and monitoring opportunities.

No adverse impacts to birds are anticipated as a result of the boundary change. Birdwatching is popular within the Reserve and the expansion would lead to additional areas for the public to enjoy birding, along with additional opportunities to conduct research and monitoring of the avian species found within the Reserve.

Furthermore, the boundary change would lead to additional opportunities for invertebrate research, including adding additional areas that could be utilized for research and monitoring of crustacean, mollusk, and invertebrate plankton species within the Reserve. Reserve staff are already engaged in several projects aimed at mapping and monitoring the critical species around the ESNERR region, enhancing communication among practitioners, identifying data gaps, and initiating pilot-scale mapping and monitoring studies. When added to the boundary, the proposed parcels would also be potential areas for expanding this work.

The No Action Alternative would prevent the expanded study of biological resources on the proposed addition parcels. The No Action Alternative presents the anticipated negative effect of not preventing invasive species, not preventing the take of resources, and inconsistent watershed resource management. For these reasons, the Preferred Alternative would likely have minor beneficial impacts on wildlife and marine resources when compared to the No Action Alternative.

5.2.4 Protected Species

There would be no impacts expected on the protected species existing in the ESNERR and in the proposed expansion parcels due to the Preferred Alternative. There are several species within ESNERR region that are protected by the Endangered Species Act (ESA) and/or the Marine Mammal Protection Act (MMPA), including the Southern sea otter and harbor seal; bird species including the California least tern, marbled murrelet, and western snowy plover; amphibian species including California red-legged frog, California tiger salamander, and Santa Cruz long-toed salamander; fish species including the

tidewater goby; and several flowering plant species including, Monterey gilia, Monterey spineflower, Santa Cruz tarplant and Yadon's piperia. Current Reserve management protocols foster research, monitoring, stewardship and education programs for these protected species. The proposed boundary change would result in additional research and monitoring of the protected species existing in the project area and expansion parcels, which may result in direct short-term and long-term population level benefits for the protected species. The Reserve designation of additional parcel areas would have no effect on the protected species under ESA and MMPA.

The No Action Alternative would prevent the extension of active protection of ESA- and MMPA-listed species. Invasive species and other threats to listed species would not be managed by the NERR if the No Action Alternative were selected.

5.2.5 Cultural and Historic Resources

The expansion of ESNERR is not expected to have an impact on any cultural or historic resources. California State Historic Preservation Office (SHPO), in their letter dated December 2, 2006, indicated their opinion regarding acquisition of 23.89 acres of land consisting of Wells and Howell parcels for the ESNERR. The SHPO letter determines that because these lands would be acquired under the overall estuarine management of the Reserve and there would be no change in the current land use, the SHPO did not have any objection towards the acquisition. The letter further determines that one previously recorded archeological site (CA-MNT-1182) is located within the Wells property. However, because the parcels are being acquired to maintain a buffer area around the ESNERR and these parcels would be maintained as open space dedicated to the preservation of the ecological values, the SHPO had no objection towards the finding of "No Historic Properties Affected." This letter from California SHPO is provided in Appendix A.

Review of records at the California Historical Resources Information System show that impact-related archeological surveys are being conducted on a regular basis in the Reserve, so that the threats of site destruction are not nearly as great as before. However, since much of the land in the Reserve area is privately owned, access to the possible sites has always been a problem. Perhaps, as partnerships develop between the private sector and the Reserve, opportunities would develop for a larger-scale survey (Site Profile 2002). Therefore, should any cultural or historic resources be discovered within the proposed boundaries in the future, the comprehensive management approach afforded by NOAA would provide important protection and research capacities allowing for the appropriate conservation and documentation of the cultural resources. The Reserve designation of additional parcels would have no effect on the cultural and historic resources protected under the National Historic Preservation Act (NHPA). However, with NOAA's future funding, if the need arises, appropriate Section 106 consultation would be completed at that time.

The No Action Alternative would put one historical property within the Wells property at risk of development. This alternative would exclude the selected properties from regular historical screenings performed by the NERR. Additionally, the No Action Alternative would potentially hinder or prevent a partnership between the private sector and the Reserve to organize access to historical sites within the

Reserve. Compared to the No Action Alternative, the Preferred Alternative would not have the potential to affect historic and cultural properties.

5.2.6 Socioeconomic Resources

Existing land uses in the expansion parcels include agriculture, commercial, industrial, and open space/habitat reserves. There are few homes in the project vicinity and the density of residential development is very low (minimum building sites range from 1 to 40 acres).

With the Preferred Alternative, the Reserve proposes to manage the expansion parcels for research and conservation. Some parcels would be used to research on the effectiveness of grazing for controlling the invasive weeds and non-native grasses; while some would be used to explore farming options. For example: One of the proposed expansion parcels, the Minhoto property, is being used mainly for agricultural production and the remainder of the property is dominated by degraded salt marsh vegetation. These farm fields have been identified by the USDA-Natural Resource Conservation District as prime farmland and as farmland of statewide importance. However, farm fields in the slough region are going out of production rapidly since the groundwater used for irrigation has become salty. As their environmental stewardship initiative, the Reserve is considering other conservation options for such fields. With the Preferred Alternative, the Reserve proposes to explore dryland agriculture in the Minhoto property. Dryland farming is not just a yield maximization strategy; but it also allows nature to dictate the true sustainability of agricultural production in a region. The ESNERR regulations support this use within a Reserve's buffer area as part of the Reserve's resource manipulation plan (2007- 2011 Site Management Plan). Therefore, Reserve's partnerships and research oriented environmental stewardship, would help in maximizing the land use and socioeconomic options in the expansion parcels.

An important factor attributable to the proposed ESNERR boundary change is the expansion of its value for research, education, and the local economy. For example, additional students, volunteers, and researchers would rent housing, purchase gasoline and groceries, etc. from regional merchants. If a multiplier effect of 3.0 is estimated (O'Connor and Sharna 1976) for the value of educational services, the impact would be beneficial. For example, if 20 additional researchers attend the ESNERR and spend $5,000/year each, this would mean an additional $300,000 spent within the regional economy (20 * $5,000 * 3.0) (FEIS 1979).

The communities immediately surrounding the Reserve are mainly white and Hispanic. The Reserve participates in and has developed educational programs that expose local students and teachers in Watsonville and Castroville to the natural environment of the Reserve. They also learn about potential careers in conservation and science. Therefore, expansion of the ESNERR's boundaries is expected to have minor to moderate long-term beneficial impacts to the socioeconomic scenario of the region due to the extension of research and educational programs.

Extending the Reserve's management and stewardship into the proposed expansion parcels would enhance opportunities for tourism and recreation (e.g., hiking, bird watching), yielding direct, long-term, localized benefits to marine area use, recreation, and socioeconomics. Increased visitation to the Reserve for recreation or tourism would result in minor to moderate beneficial long-term regional economic

impacts due to increased visitor spending in the coastal communities from which the Reserve is accessed. In addition, ESNERR would foster exploration of sustainable land management techniques in the expansion parcels like dry farming. The slough community may realize a minor economic benefit from Reserve's research both inside and outside of the proposed expansion areas as a result of integrated habitat protection. In addition, the Preferred Alternative does not propose construction of any new facilities or installation of infrastructure elements; while it proposes to incorporate expansion parcels in the ESNERR administrative boundaries. As a result, the proposed action would be expected to have no adverse impact with respect to physically dividing an established community.

The No Action Alternative would prevent the expansion of monitoring, research, and education throughout the selected parcels. Additionally, this alternative would prevent the development of exploratory farming options as well as limiting tourism and recreational opportunities. Compared to the No Action Alternative, the Preferred Alternative is expected to have minor to moderate beneficial socioeconomic impacts.

5.3 Unavoidable Adverse Environmental Effects

There are no significant and unavoidable adverse environmental effects expected from the expansion of ESNERR boundary to include the nine additional buffer parcels and removal of 13.98 acres of the Seal Bend property from the current boundary. There could be minor unavoidable socioeconomic effects due to potential loss of tax revenues to the Monterey County through public acquisition of these nine parcels. Additional spending by researchers and tourist may offset this reduction in property tax revenue. More localized minor adverse impacts could be limited lost opportunities for agriculture and limited residential or commercial development. However, long term benefit provided by the extension of NERRS uniform management policy of strategic land use and resource management programs, would offset limited short term benefit realized by the agriculture, residential or commercial development. The traditional agriculture has exacerbated the non-point source pollution in the slough region and the groundwater used for irrigation has become salty. The opportunities for research, exploration, and education related to these significant land and water resources are critical for understanding changes occurring in the environment. The Reserve designation of these expansion parcels, would open the opportunity of exploring sustainable farming, harvesting, grazing and other land use techniques to maximize the resource management in these parcels. For these reasons, the comprehensive management approach offered by the NERR designation is needed in the expansion parcels, and the ESNERR is uniquely positioned to provide a coordinated environmental stewardship program to protect these vital areas in the long term.

5.4 Relationship Between Short-Term Uses of Man's Environment and the Maintenance of Long-Term Productivity

While inclusion of the proposed parcels within the ESNERR boundary would restrict some local short term uses of the environment, it would also provide long term assurance that natural resources and benefits of the area would be available for future use and enjoyment. Without NERR designation, current land use of these parcels would likely continue as they currently exist. Such uses most likely would result in lost benefits because of continued degradation of the environment. Without land use control, the traditional conflict between residential, commercial, industrial, and wildlife estuarine users could be

expected to intensify. In addition, research information derived from the Reserve programs over the long term would assist in the coastal management decision-making process and wise use of remaining estuarine resources. These results may help avoid conflicts and mitigate adverse impacts caused by man's activities in the coastal zone.

5.5 Irreversible or Irretrievable Commitments of Resources

Within the proposed expansion parcels, there are no resources that would be irreversibly or irretrievably lost, because the resources would be protected and managed, not destroyed or removed. However, because the intent of the proposed action is to provide permanent resource protection to the buffer parcels via the extension of Reserve management, incompatible uses in the estuarine reserve such as off- road vehicle use, harvesting of mineral resources, diking, dredging, drainage or otherwise tampering with the natural system, or causing disturbance within the expansion parcels would not occur, except for possible ESNERR conducted research projects.

5.6 Cumulative Effect Analysis and Conclusion

Potential cumulative effects are assessed to determine the incremental consequences of an action when added to other past, present, and reasonably foreseeable future actions (40 C.F.R 1508.7). The direct effects of an individual action may be negligible but may contribute to a measurable environmental impact when considered cumulatively with indirect effects and with other past/and or reasonably foreseeable future projects. Cumulative impacts may result from individually minor but collectively significant actions taking place over a period of time.

Because of the national and statewide interest and significance of the ESNERR, the proposed boundary change would require special local coastal planning efforts to be carried out in the ESNERR watershed by Monterey County in coordination with State and Federal management agencies. The Monterey County Local Coastal Plan (LCP) contains the implementing actions (e.g. zoning, development criteria, resource management programs etc.) encompassing the Reserve area. Each coastal city and county must develop such an LCP under mandate of the 1976 Coastal Act, which provides the means for determining and resolving such complex land use and resource management issues as existing at ESNERR. In the Elkhorn region, permit appeal authority to the State Coastal Commission would always be retained for all developments within 100-feet of wetland/estuarine areas and streams, as well as over all public trust lands. The estuarine expansion would have to be certified by Monterey County in conjunction with its LCP. Table 5.1 lists the plans and projects in the vicinity of the proposed action that were considered in the cumulative impact analysis, based on the above-referenced factors.

Table 5.1 Projects Considered in Cumulative Impact Analysis

Project Name (Jurisdiction)	Project Description	Estimated Implementation Schedule

Project Name (Jurisdiction)	Project Description	Estimated Implementation Schedule
Moss Landing Community Plan (Moss Landing Community Plan Policy Matrix 2017)	The Moss Landing Community Plan guides planning and development decisions within Moss Landing for the next 10 to 30 years. The Community Plan focuses mainly on activities within the Moss Landing Harbor area but does extend to lands east of Highway 1 into The ESNERR region. Presently in draft form, the final Community Plan would be a chapter within the North County Land Use Plan. It identifies several short-term and long-term development projects in its proposed master plan. a) The County of Monterey along with the California Public Utilities Commission is proposing development of a transmission line from the Moss Landing Power Plant across ESNERR. b) Moss Landing Marine Labs conceptual development plans include: 1) a combined marine operations, research diving and sustainable fishery offloading facility; 2) modifications to existing facilities at their northern Shore Laboratory Complex, 3) a southern Shore Laboratory Complex that combines a research pier/coastal observatory, large animal holding tanks, lab space and an integrated aquaculture research facility; and 4) housing and visitor-serving facilities for the accommodations of students during the academic year and workshops, classes and special programs during the summer. c) Moss Landing Business Park Development would include a pedestrian connection between Moss Landing Business Park and the west side of State Route 1. Total development in the Moss Landing Business Park would be limited to 1,000,000 square feet of structure(s) and or 25,000-gpd wastewater, whichever is more restrictive. d) County of Monterey in consultation with the Moss Landing Harbor District plans to increase the development of appropriate recreation uses and commercial uses that serve visitors in the North Harbor area and the improvement of public recreational boating facilities. e) The County of Monterey in coordination with the Moss Landing Harbor District plans to support the Harbor District's plans to curtail expansion of Moss Landing Harbor south of Sandholdt Bridge. f) Moss Landing Harbor District participates with the U.S. Army Corps of Engineers (USACE) in the regular maintenance dredging of the Moss Landing Harbor and channel that occurs every 2 to 4 years.	2018-2045 Ongoing
Deep Water	Construction of a 15-million-gallon-per-day seawater	Beyond 2020

Project Name (Jurisdiction)	Project Description	Estimated Implementation Schedule
Desal, LLC (City of Salinas)	desalination facility located on a 110-acre site in Moss Landing, on Dolan Road, approximately 1,500 feet east of the Moss Landing Power Plant. This project would serve the City of Salinas.	
CalAm Monterey Peninsula Water Supply Project	Construction of a 9.6 million gallons per day (mgd) capacity desalination plant in unincorporated Monterey County on Charles Benson Road, northeast of the City of Marina. It would produce approximately 10,750 acre-feet per year of desalinated water.	Beyond 2021
Buena Vista Area Projects (City of Watsonville)	The Watsonville Vista 2030 General Plan envisions the Buena Vista Area as the focus of substantial new population and employment growth over the next 20 years. Preliminary concepts for the Buena Vista Area include a mix of commercial, mixed use, residential, public, parklands, and agricultural uses over the approximately 466-acre plan area.	Ongoing

Cumulative Impacts on Land Use

The proposed project of ESNERR boundary change would not introduce new land uses and would not disrupt existing nearby land uses or preclude use of those lands for industrial, agricultural, or habitat conservation activities.

The Moss Landing Community Plan identified in Table 5.1 involves new land uses that would be expected to disrupt existing nearby land uses or preclude use of those lands for industrial, agricultural, or habitat conservation activities. The Moss Landing Community Plan guides planning and development decisions within Moss Landing for the next 10 to 20 years. The Community Plan focuses mainly on activities within the Moss Landing Harbor area, extending to lands east of Highway 1, into ESNERR area. Presently in draft form, the final Community Plan would be a chapter within the North County Land Use Plan. The Community Plan policies are required to be consistent with the Coastal Act and the Monterey County Community Plan (MLCP Policy Matrix 2017). For these reasons, projects proposed in the Moss Landing Community Plan would not be expected to cause any substantial land use impacts that could combine with those of the proposed project and prove to be environmentally detrimental. The current land uses of expansion parcels are either agriculture, home site, or grazing. With the Preferred Alternative, land use of the expansion parcels would be associated with Reserve research, monitoring, or recreation efforts. The Preferred Alternative, due to its low level of intensity in the context of the wide array and scale of ongoing projects identified in Table 5.1, would result in less than significant cumulative operational impacts on nearby land uses.

Cumulative Impacts on Biological Resources

The extension of the Reserve is administrative and management boundary to include some buffer parcels would likely result in net benefit to the biological resources of the Reserve system. The proposed action would be anticipated to result in overall management of the area marshes to create highly productive tidal marshes that export organic matter to tidal sloughs, channels, and mudflats, thereby increasing quality of estuarine habitats and water quality throughout the entire Reserve system. The biological benefits

achieved with Reserve management would extend into the overall Reserve system in the forecasted future. The Moss Landing Community Plan contains some tidal restoration projects proposed in the area. These projects are expected to result in the restoration of thousands of acres of much higher-quality habitat than currently occurs, and thus would benefit many of the species that occur in ESNERR. In addition, many migratory species use the Reserve; ESNERRs management is thus expected to result in a more vital tidal estuary that would benefit species that occur elsewhere on the California coast and in the Pacific Flyway. The combined resource protection and restoration provided by the projects identified in Table 5.1 would likely result in positive influences on coastal habitats and resources (i.e., long-term, moderate beneficial impacts both localized and beyond the proposed boundaries). The Preferred Alternative, due to its low level of intensity and the lack of expected adverse impacts, is not anticipated to have a cumulatively significant additive or synergistic impact on biological resources.

Cumulative Impacts on Hydrology and Water Quality

The geographic area for the analysis of cumulative hydrology and water quality impacts is the adjacent section of the Reserve in the vicinity of the expansion parcels. Over the long-term, implementation of ESNERR's management in the expansion parcels would represent a minor improvement in water quality within the watershed compared to current conditions at the site and in the surrounding area. Research and monitoring efforts of the NERR, as well as expanded educational efforts, would decrease the potential for agricultural and pesticides runoff, spikes in turbidity caused by the suspension of sediments, and any ongoing channel erosion. Given the measures taken to reduce and avoid hydrologic and water quality impacts related to the construction and operation of the projects identified in Table 5.1, the boundary expansion would not be expected to make a considerable contribution towards any cumulative water quality or hydrology related impacts. The Preferred Alternative, due to its low level of intensity and the minor and beneficial nature of its expected impacts, would result in less than significant cumulative impacts on the hydrology and water quality of the region when considered in conjunction with the proposed and ongoing water supply projects identified in Table 5.1.

Cumulative Socioeconomic Impacts

If the proposed project contemporaneously induced population growth or displaced housing units or people in the same area(s) as other projects, then the combined impacts could cumulatively affect population and housing resources. However, the proposed project of administrative boundary change of ESNERR would not induce population growth or displace housing or people, and therefore would not contribute to a cumulative impact on population and housing resources. As identified in Section 5.2.7, the Preferred Alternative would result in minor beneficial impacts on tourism, recreation, local economics, research, education, and passive economic use. The Preferred Alternative, due to its low level of intensity and the minimal nature of its expected socioeconomic impacts, is not expected to have a considerable contribution to cumulatively significant socioeconomic impacts on the slough region when considered in conjunction with the projects in Table 5.1.

Cumulative Air Quality, Transportation and Traffic Impacts

The geographic scope for potential cumulative impacts related to transportation and circulation encompasses the State highways in the project vicinity (i.e., SR 1, SR 156, and SR 183) and local roads. The ESNERR boundary change project would result in a small increase in visits associated with recreational facilities and traffic related to periodic maintenance and monitoring of expansion parcels. As

such, the proposed project would not substantially affect recreational opportunities in the area. In addition, the transportation and traffic impacts of the proposed project, when combined with those of past, present, and reasonably foreseeable projects in the area, would not be expected to be cumulatively considerable. Thus, the proposed project would contribute to less than significant cumulative impact on transportation and traffic. In addition, the Preferred Alternative, due to its low level of intensity and the minor and localized nature of any air quality impacts, is not expected to have a considerable contribution to cumulatively significant air quality impacts on the slough region when considered in conjunction with the projects in Table 5.1. Finally, although the potential traffic impacts from the Preferred Alternative may result in minor changes to greenhouse gas emission, the Preferred Alternative is not likely to result in any significant increase in greenhouse gas emissions.

Chapter 6 OTHER ENVIRONMENTAL REVIEW REQUIREMENTS

Clean Air Act

The Clean Air Act (42 U.S.C. §§ 7401 *et seq*.) directs the U.S. Environmental Protection Agency to set limits on air emissions to ensure basic protection of health and the environment. The fundamental goal is the nationwide attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). Primary NAAQS are designed to protect human health. Secondary NAAQS are designed to protect the public welfare (for example, to prevent damage to soils, crops, vegetation, water, visibility, and property). The Clean Air Act prohibits federal agencies from licensing, permitting, or approving any activity that does not conform to an approved State Implementation Plan issued to enforce the NAAQs. 42 U.S.C. § 7506(c).

Compliance: The proposed action will not significantly increase emissions that impact air quality. All vehicles and machinery that emit any air pollution are expected to be operated by the staff and others in compliance with all applicable federal, state, and local air quality rules and associated requirements.

Clean Water Act

The Clean Water Act (33 U.S.C. §§ 1251 *et seq*.) is the principal federal law governing pollution control and water quality of the Nation's waterways. Section 404, administered by the U.S. Army Corps of Engineers (USACE), authorizes a permit program for the discharge of dredged or fill material in U.S. navigable waters. Section 401 of the Act requires applicants for federal licenses or permits for activities that may result in a discharge of pollution into navigable waters of the United States to obtain a certification of compliance with applicable water quality standards and goals, from the appropriate state (or a waiver from the state).

Compliance: The proposed action does not involve dredging or the disposal of fill material, or the discharge of pollution into navigable water of the U.S.

Coastal Zone Management Act

The goal of the CZMA (16 U.S.C. §§ 1451, et seq.) is to preserve, protect, develop, and, where possible, restore and enhance the nation's coastal resources. The portions of the Act relating to the NERRS are discussed in previous chapters. Under the Act, NOAA OCM also supports implementation of federally-approved, state coastal zone management programs. Section 307 of CZMA, the "federal consistency" provision, requires any federal action inside or outside of a state's coastal zone that affects any land or water use or natural resources of the coastal zone to be consistent, to the maximum extent practicable, with the enforceable policies of an approved state coastal management program (CMP). The federal consistency regulations at 15 C.F.R. part 930 set forth detailed timeframes and procedures that must be followed. Subpart C of the regulations provides that for all federal agency activities, inside or outside the coastal zone, the federal agency must submit a Consistency Determination to the state if the federal agency determines the activity may have reasonably foreseeable effects on the state's coastal uses or resources. 15 C.F.R. § 930.34(a)(1). Federal agency activities must be consistent to the maximum extent practicable with the enforceable policies of the state's CMP. If there are no reasonably foreseeable

effects, the federal agency may be required to provide a Negative Determination to the state. *See* 15 C.F.R. § 930.35.

Compliance: California has the authority to review, pursuant to the federal consistency provisions of CZMA, Federal agency activities, federal licenses, permits, financial assistance, and certain other activities that affect the coastal zone for consistency with the program's enforceable policies. Here, the Federal agency activity is NOAA's approval of the boundary changes to the Reserve. NOAA completed California's federal consistency process, submitting a negative determination letter prior to the completion of the boundary change requirements required by the NERRS regulations. The state provided written response, stating that they had no objection to the project (Appendix).

Endangered Species Act

The Federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. §§ 1531, *et seq.*), provides for the conservation of species that are endangered or threatened throughout all or a significant portion of their range, and for the conservation of the ecosystems on which they depend. The ESA directs all federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the Act. Under the Act, NOAA's National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) (collectively, "the Services") publish lists of endangered, threatened, candidate, and other species with special status under the Act.

Section 7(a)(2) of the ESA states that each Federal agency shall, in consultation with the Secretary, insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat for those species. The ESA requires action agencies to consult or confer with the Services when there is discretionary federal involvement or control over the action. When a Federal agency's action "may affect" a protected species or its critical habitat, that agency is required to consult with NMFS and/or the USFWS. Informal consultation with the Services is sufficient for actions that "may affect but are not likely to adversely affect" listed species or critical habitats. This finding can be made only if ALL of the reasonably expected effects of the proposed action will be beneficial, insignificant, or discountable. An action agency shall confer with the Services if the action is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification of proposed critical habitat. Formal and informal consultation requires a written analysis be submitted to NMFS and/or USFWS, and a biological assessment is required for major construction activities if listed species or critical habitat may be present in the action area. An action agency shall confer with the Services if the action is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification of proposed critical habitat.

Compliance: Chapter 4 identifies federally-listed threatened and endangered species and critical habitat, as designated by the Services, which may be present within or sufficiently near the proposed boundary expansion area. OCM anticipates that changing the ESNERR boundary will have no effect on species listed as threatened or endangered, nor will it affect critical habitat of any listed species. No ground disturbance is planned, and advisories are in place to prevent visitors from causing damage to the NERR. As is policy, OCM did not consult with the Services for this proposed action since no effects are anticipated. OCM will comply with ESA requirements as future funding or approval decisions are made.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §§ 1801 *et seq*.) as amended and reauthorized by the Sustainable Fisheries Act (Public Law 104-297), established a program to promote the protection of essential fish habitat for Federally-managed species in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After essential fish habitat has been described and identified in fishery management plans by regional fishery management councils, federal agencies are obligated to consult with the National Marine Fisheries Service with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat.

Compliance: The Reserve does not have any designated EFH within its boundaries; EFH can be found further west in the open ocean. Overall, NERR operation practices are not expected to have an adversely impact on EFH. However, potential beneficial secondary effects may occur by contributing to habitat enhancement, improving scientific knowledge associated with EFH, and encouraging the protection of EFH. New research conducted under the auspices of the Reserve might allow resource managers to understand and mitigate adverse effects to EFH from projects implemented in the area surrounding the Reserve. With respect to activities conducted in the water, analysis of alternative designs, options for installation, and appropriate best management practices by Reserve partners can lessen or eliminate potential adverse effects on EFH. As projects are proposed and at other appropriate times, OCM will consult with NMFS about the potential for funding other actions (e.g.,deployment of new monitoring equipment for the Reserve) that might adversely affect EFH. For this proposed action, however, there is insufficient specific information available about future in-water activities to assess their potential to adversely affect EFH. EFH consultation will occur, as needed, to avoid, minimize, or offset any adverse impacts to EFH, consistent with procedures outlined in the EFH federal consultation regulations at 50 C.F.R. § 600.920, and associated guidance. OCM will comply with EFH requirements as future funding or approval decisions are made.

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) of 1972 (16 U.S.C. §§ 1361 *et seq*.), as amended, prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, as well as the importation of marine mammals and marine mammal products into the U.S. There are some exceptions to the prohibitions on taking marine mammals, including a mechanism for requesting authorization from NMFS's Office of Protected Resources for "incidental," but not intentional, taking, of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing or directed research on marine mammals) within a specified geographic region. The MMPA and regulations adopted thereunder restrict harassment -- meaning any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal in the wild or that has the potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns, including breathing, breeding, feeding, migration, and sheltering. NMFS' Office of Protected Resources processes applications for incidental takes of small numbers of marine mammals. Authorization for incidental takes may be granted if NMFS finds that the taking would be of small numbers, have no more than a "negligible impact" on those marine mammal species or stocks, and not have an "unmitigable adverse impact" on the availability of the species or stock for "subsistence" use. NMFS' issuance of an incidental

take authorization also requires NMFS to make determinations under NEPA and Section 7 of the ESA. Incidental harassment authorizations may be issued when the action has the potential to result in harassment only (i.e., injury or disturbance).

Compliance: The proposed boundary expansion would not cause the take of any marine mammals. OCM will comply with MMPA requirements as future funding or approval decisions are made.

Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act (16 U.S.C. §§ 715 *et seq*.) implements the United States' commitment to bilateral treaties, or conventions, with Great Britain, Canada, Japan, Russia, and Mexico for the protection of shared migratory bird resources. The Act makes unlawful for anyone to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. The Act also regulates scientific collection and possession of migratory birds for educational purposes. The Act does not specifically protect migratory bird habitat, but USFWS may suggest consideration of time of year restrictions for construction or remedial activities at sites where it is likely migratory birds may be nesting or project schedules that would avoid migratory bird nesting seasons. Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," directs Federal Agencies taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop (within two years of the action) a Memorandum of Understanding with USFWS that promotes the conservation of migratory bird populations.

Compliance: The proposed ESNERR boundary change would not capture or kill, or import and export, or possess for scientific collection or educational purposes migratory birds. Likewise, the proposed expansion would not likely have a measurable negative effect on migratory bird populations. Following OCM's "no effect" determination on migratory birds, USFWS was not consulted regarding this action.

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) (54 U.S.C. §§ 300.101 *et seq*.) requires federal agencies to take into account the effects of their undertakings on historic properties in accordance with regulations issued by the Advisory Council on Historic Preservation (ACHP) at 36 C.F.R. part 800. The regulations require that federal agencies consult with states, tribes, and other interested parties (consulting parties) when making their effects determinations. The regulations establish four basic steps in the NHPA 106 process: determine if the undertaking is the type of activity that could affect historic properties, identify historic properties in the area of potential effects, assess potential adverse effects, and resolve adverse effects.

Compliance: The proposed Reserve boundary expansion will have no potential to cause effect on the cultural and historic resources protected under NHPA, as there are no ground-moving actions proposed at this time. However, appropriate Section 106 consultations with the state and interested tribes will be completed at the time of any earth-moving and potentially disruptive actions as future funding decisions are made.

National Marine Sanctuaries Act

Under the National Marine Sanctuaries Act (16 U.S.C. §§ 1431 *et seq*.), federal agency actions, internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or permits, that are likely to destroy, cause the loss of, or injure any sanctuary resource are subject to consultation with the Secretary of Commerce. Each federal agency proposing such an action must provide a written statement describing the action and its potential effects on sanctuary resources no later than 45 days before the final approval of the action. In addition, sanctuary permits may be required for certain actions that would otherwise be prohibited.

Compliance: The ESNERR and proposed boundary expansion area are not located within a national marine sanctuary. The proposed expansion would have no effect on any national marine sanctuaries or sanctuary resources. Therefore, OCM is not required to consult or obtain a permit pursuant to the National Marine Sanctuaries Act.

Rivers and Harbors Act

The Rivers and Harbors Act of 1899 (33 U.S.C. §§ 401 *et seq*.) regulates development and use of the nation's navigable waterways. Section 10 of the Act (33 U.S.C. § 403) prohibits the unauthorized obstruction or alteration of any navigable waters of the U.S. This section provides that the construction of any structure in or over any navigable water of the U.S., or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters is unlawful unless authorized by the USACE. Activities requiring section 10 permits include structures (e.g., piers, wharfs, breakwaters, bulkheads, jetties, weirs, transmission lines) and work such as dredging or disposal of dredged material, or excavation, filling, or other modifications to the navigable waters of the U.S.

Compliance: The proposed action is an administrative action that would not obstruct or alter navigable waters of the U.S. As such, no section 10 permit is required.

Executive Order 12898 -- Environmental Justice

To be consistent with the President's Executive Order 12898 on Environmental Justice (February 11, 1994), Executive Order 12948 (Amendment to Executive Order 12898), and the Department of Commerce's Environmental Justice Strategy, applicants must ensure that their projects will have no disproportionately high and adverse human health or environmental effects on minority or low-income populations. Federal agencies must analyze the effects of proposed programs, policies, and activities on minority and low-income populations, including Indian Tribes.

Compliance: The proposed action would not have a disproportionately high and adverse human health or environmental effects on minority or low-income populations. As noted in Chapter 4, any socioeconomic impacts resulting from the application of the Reserve management and resource protection activities to the proposed expansion area are expected to be minor and beneficial.

Executive Order 11990 – Protection of Wetlands; Executive Order 11988 – Floodplain Management

Executive Order 11990 requires Federal agencies to avoid, to the extent possible, adverse impacts associated with occupying or modifying floodplains and wetlands, and to avoid floodplain or wetland development whenever there is a practical alternative. Executive Order 11988 requires Federal agencies

to avoid, to the extent possible, long and short-term adverse impacts associated with the occupancy and modification of floodplains.

Compliance: *The proposed action would not have adverse impacts associated with the occupancy or modification of wetlands, the destruction or loss of wetlands or encroachment into designated floodplain areas. Additionally, protection of natural coastal areas may have a positive impact on developed areas during floods.*

Executive Order 13112 – Invasive Species
The purpose of Executive Order 13112 is to prevent the introduction of invasive species; respond to and control invasions in a cost-effective and environmentally sound manner to minimize their economic, ecological, and human health implications; and to provide for restoration of native species and habitat conditions in ecosystems that have been invaded.

Compliance: Combating invasive species has been identified as a priority in ESNERR's management plan. Reserve partners are aware of risks associated with invasive species and how to combat their spread. The stewardship staff works collaboratively with the Reserve research and education staff to design and implement a number of projects targeted towards invasive species control. These Reserve initiatives would be extended to the proposed expansion parcels and therefore the proposed action would be in compliance with the Executive Order 13112.

Executive Order 13158 – Marine Protected Areas
Executive Order 13158 requires federal agencies to identify actions that affect natural or cultural resources that are within MPAs. It further requires federal agencies, in taking such actions, to avoid harm to the natural and cultural resources that are protected by MPAs.

Compliance: The proposed ESNERR boundary change would not harm the natural or cultural resources that would be located in the expanded Reserve. Rather, the proposed expansion would enlarge the total area of protected aquatic areas within the U.S.

Chapter 7 LIST OF PREPARERS AND PERSONS CONTACTED

Avanti Corporation

Megan Grove	Environmental Scientist
Sarah Kownacki	Environmental Scientist
Kirti Rajpurohit	Environmental Scientist

NOAA - Office for Coastal Management

Elaine Vaudreuil	Elkhorn Slough Site Liaison

Technical Information Consultants

Dave Feliz, Manager	Elkhorn Slough NERR Manager (CDFW)
Andrea Woolfolk	Stewardship Coordinator, Elkhorn Slough Foundation

Reviewers

Technical Advisors

Patmarie S. Nedelka	NOAA- Office for Coastal Management Environmental Compliance Coordinator
Giannina DiMaio	NOAA National Ocean Service

Legal Advisors

Martha McCoy	NOAA Office of General Counsel
Rachel Ramos	NOAA Office of General Counsel
Rachel Morris	NOAA Office of General Counsel

Chapter 8 REFERENCES

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APPENDIX A – AGENCY CORRESPONDENCE

I. County of Monterey Resource Management Agency Parcel Reports (Garcia parcel, Howell Life Estate parcel, Howell parcel, Springer parcel, Wells parcel, Tabor-Beck parcel, Jazwin parcel, Minhoto parcel)

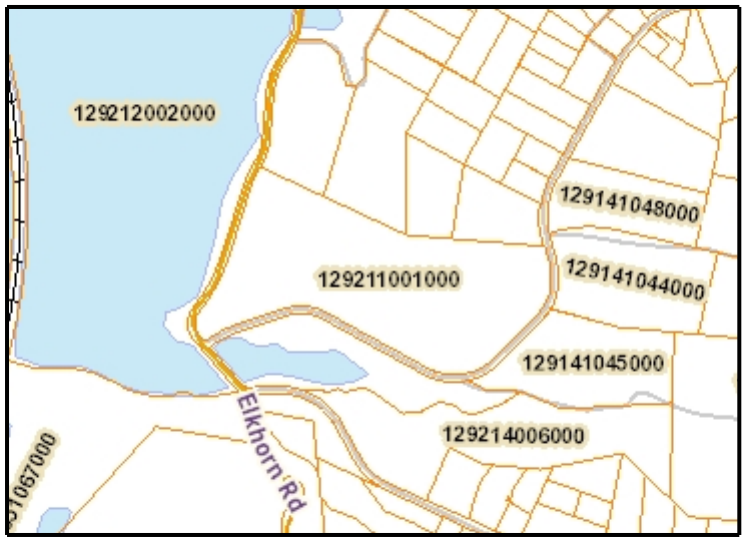
II. California Office of Historic Preservation Letter, "Proposed Elkhorn Ecological Reserve Expansions, Including the Howell Property and the Wells Property," December 12, 2006

III. USFWS Ventura Fish and Wildlife Office. 13 December 2018. IPaC Official Species Lists for Expansion Parcels (Garcia, Howell Life Estate and Howell Properties, Springer, Wells, Tabor-Beck, Jazwin, Minhoto)

IV. Federal Consistency correspondence

Federal consistency concurrence Coastal Commission_2019 Elkhorn Slough boundary expansion

County of Monterey
Resource Management Agency
1441 Schilling Place, 2nd Floor
Salinas, CA 93901 (831) 755-5025
www.co.monterey.ca.us/rma



LCP Land Use Designation:
Residential - Rural Density

Potential Hazards

Fire Hazard Zone (SRA Setback):
High|Moderate

Seismic Hazard Zone:
VI|UNDETERMINED|IV

FEMA Flood: X (unshaded)|AE
Floodway: None
Erosion Hazard Rating: High|Low
Liquefaction Susceptibility: High|Low

Landslide Susceptibility: Low|Moderate
Slope > 25%: Yes
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: low| (1 other)
Spreckels Historic District:
None

Assessor Parcel ID: 129-211-001-000
Parcel Size-Acres: 41.93593
Address:

Community: ROYAL OAKS

Planning Area: North County LCP

Zoning: RDR/5(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
None
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: Yes
School District-Building Fees:
NORTH MONTEREY CO.|PAJARO VALLEY UNIFIED

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Grazing land|Other Land

Soil Survey: AkF|Ad|Ar

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:

None

Subdivision:

None

2nd Unit Restricted Area: None

FORA Land Use:

None

Castroville Community Plan:

None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:

None

Rural Center: None

Community Area: None

Special Treatment Area:

None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: None

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:

None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:

None

Library Reports

Forestry Reports: 33.03.011

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: 04.09.37

Others

NPDES Municipal General Permit Boundary:

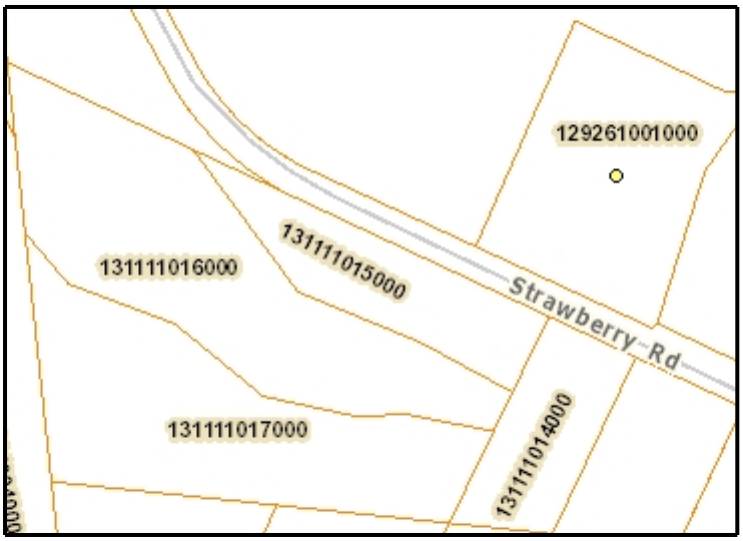
Yes

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

County of Monterey
Resource Management Agency
1441 Schilling Place, 2nd Floor
Salinas, CA 93901 (831) 755-5025
www.co.monterey.ca.us/rma



LCP Land Use Designation:
Residential - Rural Density

Potential Hazards

Fire Hazard Zone (SRA Setback):
High

Seismic Hazard Zone:
VI

FEMA Flood: X (unshaded)
Floodway: None
Erosion Hazard Rating: High|Low
Liquefaction Susceptibility: High
Landslide Susceptibility: Low|Moderate
Slope > 25% : None
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: low
Spreckels Historic District:
None

Assessor Parcel ID: 131-111-015-000
Parcel Size-Acres: 1.5104
Address: 72 STRAWBERRY RD

Community: ROYAL OAKS

Planning Area: North County LCP

Zoning: RDR/5(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
North County Public Rec District (Castroville)
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: Yes
School District-Building Fees:
NORTH MONTEREY CO.

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Other Land

Soil Survey: AkF|Ad

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:
None

Subdivision:
LOCKE-PADDON COLONY 47

2nd Unit Restricted Area: None

FORA Land Use:
None

Castroville Community Plan:
None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:
None

Rural Center: None

Community Area: None

Special Treatment Area:
None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: None

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:
None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:
None

Library Reports

Forestry Reports: None

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: None

Others

NPDES Municipal General Permit Boundary:
Yes

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

County of Monterey
Resource Management Agency
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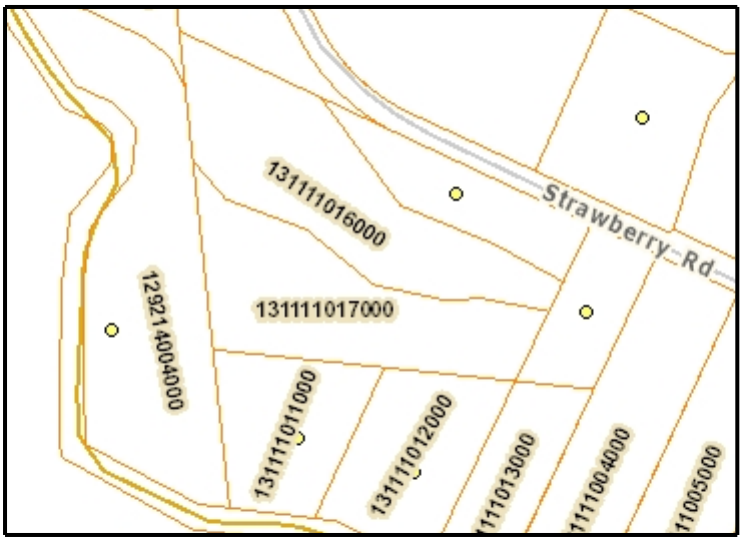
Salinas, CA 93901 (831) 755-5025
www.co.monterey.ca.us/rma



LCP Land Use Designation:
Residential - Rural Density

Potential Hazards

Fire Hazard Zone (SRA Setback):
High

Seismic Hazard Zone:
VI|UNDETERMINED|IV

FEMA Flood: X (unshaded)
Floodway: None
Erosion Hazard Rating: High
Liquefaction Susceptibility: Low
Landslide Susceptibility: Low|Moderate
Slope > 25%: Yes
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: low
Spreckels Historic District:
None

Assessor Parcel ID: 131-111-017-000
Parcel Size-Acres: 3.4886
Address:

Community: ROYAL OAKS

Planning Area: North County LCP

Zoning: RDR/5(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
North County Public Rec District (Castroville)
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: Yes
School District-Building Fees:
NORTH MONTEREY CO.

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Other Land

Soil Survey: AkF

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:
None

Subdivision:
LOCKE-PADDON COLONY 47

2nd Unit Restricted Area: None

FORA Land Use:
None

Castroville Community Plan:
None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:
None

Rural Center: None

Community Area: None

Special Treatment Area:
None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: None

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:
None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:
None

Library Reports

Forestry Reports: None

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: None

Others

NPDES Municipal General Permit Boundary:
Yes

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

County of Monterey
Resource Management Agency
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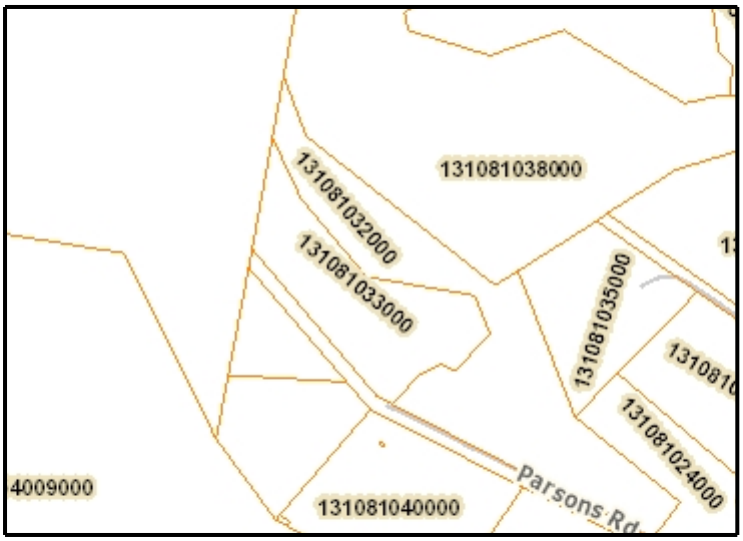
www.co.monterey.ca.us/rma



LCP Land Use Designation:
Wetlands & Coastal Strand|Residential - Rural Density

Potential Hazards

Fire Hazard Zone (SRA Setback):
None

Seismic Hazard Zone:
VI

FEMA Flood: X (unshaded)
Floodway: None
Erosion Hazard Rating: High|Moderate
Liquefaction Susceptibility: High|Low
Landslide Susceptibility: Low
Slope > 25% : Yes
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: high
Spreckels Historic District:
None

Assessor Parcel ID: 131-081-033-000
Parcel Size-Acres: 5.80747
Address:

Community: CASTROVILLE

Planning Area: North County LCP

Zoning: RDR/5(CZ)|RC(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
North County Public Rec District (Castroville)
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: Yes
School District-Building Fees:
NORTH MONTEREY CO.

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Other Land

Soil Survey: ShD|ShE

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:
None

Subdivision:
DEL MONTE FARMS SUBDIVISION #2

2nd Unit Restricted Area: None

FORA Land Use:
None

Castroville Community Plan:
None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:
None

Rural Center: None

Community Area: None

Special Treatment Area:
None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: None

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:
None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:
None

Library Reports

Forestry Reports: None

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: None

Others

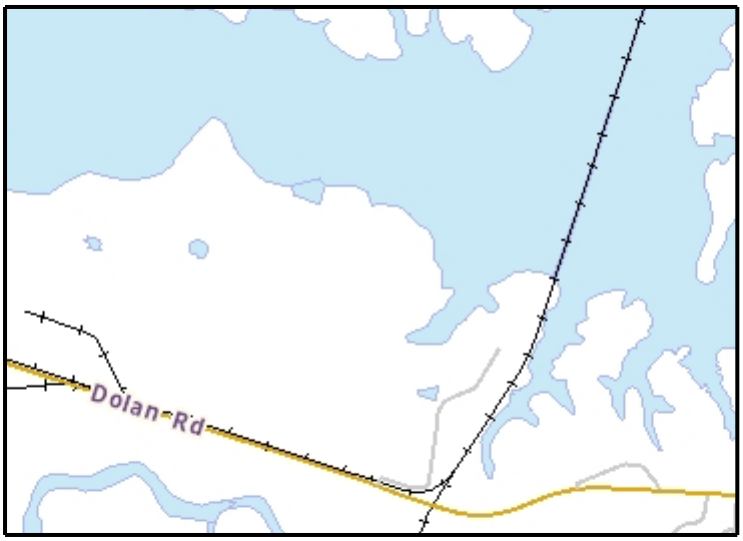
NPDES Municipal General Permit Boundary:
Yes

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

County of Monterey
Resource Management Agency
1441 Schilling Place, 2nd Floor
Salinas, CA 93901 (831) 755-5025
www.co.monterey.ca.us/rma



LCP Land Use Designation:
Wetlands & Coastal Strand|Agricultural Preservation

Potential Hazards

Fire Hazard Zone (SRA Setback):
None

Seismic Hazard Zone:
VI

FEMA Flood: X (unshaded)|AE
Floodway: None
Erosion Hazard Rating: High|Moderate|Variable| (1
Liquefaction Susceptibility: High|Low
Landslide Susceptibility: Low
Slope > 25% : None
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: high
Spreckels Historic District:

None

Assessor Parcel ID: 133-181-004-000
Parcel Size-Acres: 208.70064
Address:

Community: MOSS LANDING

Planning Area: North County LCP

Zoning: RC(CZ)|CAP(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
North County Public Rec District (Castroville)
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: Yes
School District-Building Fees:
NORTH MONTEREY CO.

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Farmland of statewide importance|Unique Farmland|Other Land|Prime Farmland| (1 other)

Soil Survey: Ac|OaD|ShC|ShE|ShD|W| (2 others)

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:
None

Subdivision:
None

2nd Unit Restricted Area: None

FORA Land Use:
None

Castroville Community Plan:
None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:
None

Rural Center: None

Community Area: None

Special Treatment Area:
None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: Yes

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:
None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:
None

Library Reports

Forestry Reports: None

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: None

Others

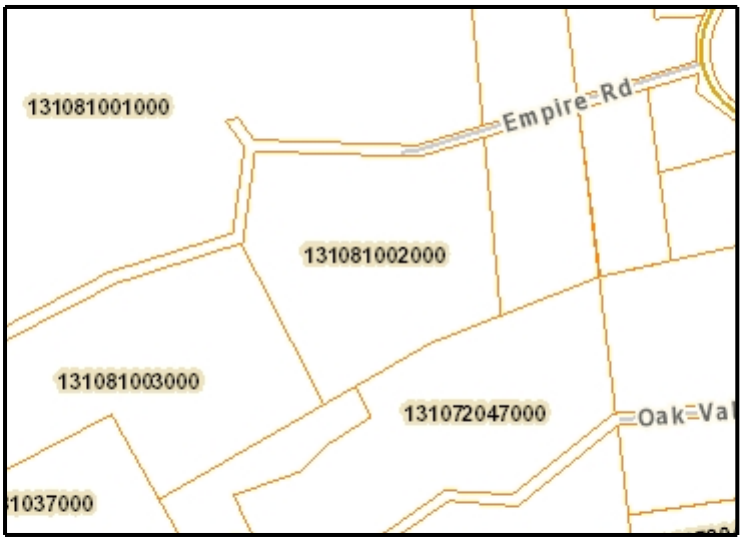
NPDES Municipal General Permit Boundary:
None

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

County of Monterey
Resource Management Agency
1441 Schilling Place, 2nd Floor
Salinas, CA 93901 (831) 755-5025
www.co.monterey.ca.us/rma



LCP Land Use Designation:
Residential - Rural Density

Potential Hazards

Fire Hazard Zone (SRA Setback):
None

Seismic Hazard Zone:
VI|UNDETERMINED|IV

FEMA Flood: X (unshaded)
Floodway: None
Erosion Hazard Rating: High|Moderate
Liquefaction Susceptibility: Low
Landslide Susceptibility: Low
Slope > 25% : None
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: high
Spreckels Historic District:
None

Assessor Parcel ID: 131-081-002-000
Parcel Size-Acres: 18.41434
Address: 37 EMPIRE RD

Community: CASTROVILLE

Planning Area: North County LCP

Zoning: RDR/10(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
North County Public Rec District (Castroville)
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: None
School District-Building Fees:
NORTH MONTEREY CO.

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Grazing land|Unique Farmland

Soil Survey: ShC|ShE

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:
None

Subdivision:
DEL MONTE FARMS SUBDIVISION #2

2nd Unit Restricted Area: None

FORA Land Use:
None

Castroville Community Plan:
None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:
None

Rural Center: None

Community Area: None

Special Treatment Area:
None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: None

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:
None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:
None

Library Reports

Forestry Reports: None

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: None

Others

NPDES Municipal General Permit Boundary:
Yes

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

County of Monterey
Resource Management Agency
1441 Schilling Place, 2nd Floor
Salinas, CA 93901 (831) 755-5025
www.co.monterey.ca.us/rma

LCP Land Use Designation:
Residential - Rural Density

Potential Hazards

Fire Hazard Zone (SRA Setback):
None

Seismic Hazard Zone:
VI|UNDETERMINED|IV

FEMA Flood: X (unshaded)
Floodway: None
Erosion Hazard Rating: High|Moderate
Liquefaction Susceptibility: Low
Landslide Susceptibility: Low
Slope > 25%: Yes
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: high
Spreckels Historic District:
None

Assessor Parcel ID: 131-081-022-000
Parcel Size-Acres: 10.86428
Address:

Community: CASTROVILLE

Planning Area: North County LCP

Zoning: RDR/5(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
North County Public Rec District (Castroville)
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: None
School District-Building Fees:
NORTH MONTEREY CO.

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Other Land|Urban and built up land

Soil Survey: ShD|ShC|ShE

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:
None

Subdivision:
DEL MONTE FARMS SUBDIVISION #2

2nd Unit Restricted Area: None

FORA Land Use:
None

Castroville Community Plan:
None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:
None

Rural Center: None

Community Area: None

Special Treatment Area:
None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: None

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:
None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:
None

Library Reports

Forestry Reports: None

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: None

Others

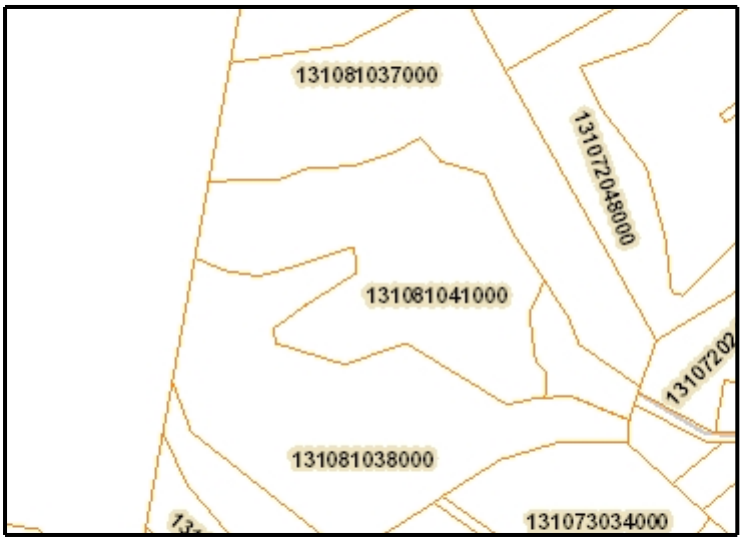
NPDES Municipal General Permit Boundary:
Yes

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

County of Monterey
Resource Management Agency
1441 Schilling Place, 2nd Floor
Salinas, CA 93901 (831) 755-5025
www.co.monterey.ca.us/rma



LCP Land Use Designation:
Wetlands & Coastal Strand|Residential - Rural Density

Potential Hazards

Fire Hazard Zone (SRA Setback):
None

Seismic Hazard Zone:
VI

FEMA Flood: X (unshaded)|AE
Floodway: None
Erosion Hazard Rating: High|Moderate|Low
Liquefaction Susceptibility: High|Low
Landslide Susceptibility: Low
Slope > 25%: Yes
Active/Potentially Active Faults (660` buffer): None

Historical Resources

Historical Site: None
Archaeological Sensitivity: high
Spreckels Historic District:
None

Assessor Parcel ID: 131-081-041-000
Parcel Size-Acres: 20.04366
Address: 120 SPRING POINT ROAD

Community: CASTROVILLE

Planning Area: North County LCP

Zoning: RDR/5(CZ)|RC(CZ)

Land Use Designation:
None

Zoning Notes:
None

Land Use Advisory Committee:
North County Advisory Committee

Administrative Boundaries & Districts

City: None
County Service Area: None
Recreation District:
North County Public Rec District (Castroville)
North County Water Impact Area: Yes
Water Mngmnt Agency: None
MCWRA Zone 2C: Yes
Within a CCC Appeal Area: Yes
School District-Building Fees:
NORTH MONTEREY CO.

Fire District: North County FPD
CAL-AM Service Area: None

Agricultural & Soil

Williamson Act Contract: None
Important Farmlands:
Other Land

Soil Survey: Rb|EeE|ShC

Planning

Pescadero Watershed: None

Del Monte Forest Sub-Planning Area:
None

Subdivision:
DEL MONTE FARMS SUBDIVISION #2

2nd Unit Restricted Area: None

FORA Land Use:
None

Castroville Community Plan:
None

SB 252 Zone: Yes

Coastal Zone: Yes

Toro B-8 Zone: None

Visual Sensitivity: None

Wine Corridor:
None

Rural Center: None

Community Area: None

Special Treatment Area:
None

Carmel Valley Alluvial Basin: None

Ordinance 5302 Zone: None

Biology

Monterey Spineflower Critical Habitat: None

Snowy Plover Critical Habitat: None

Environmental Impact Reports:
None

Western Arroyo Toad Critical Habitat: None

San Joaquin Kit Fox Distribution: None

Vegetation:
None

Library Reports

Forestry Reports: None

Drainage Reports: None

Biology Reports: None

Historic Reports: None

Geology Reports: None

Soil Reports: None

Archaelogical Reports: None

Others

NPDES Municipal General Permit Boundary:
Yes

TAMC Development Fee Area: North County

Traffic Fee Impact Area: None

ASBS Watershed Protection Area: None

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov

December 12, 2006

In Reply Refer To: NOAA061201A

Teri Muzik
Senior Land Agent
Department of Fish and Game
Wildlife Conservation Board
1807 13th Street, Suite 103
Sacramento, California 95814-7137

Re: Proposed Acquisition by the Wildlife Conservation Board of the California Department of Fish and Game of 23.89 Acres of Land for the Elkhorn Slough Ecological Reserve, Monterey County, California.

Dear Ms. Muzik:

Thank you for seeking consultation with me regarding the above noted undertaking, pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act. The Wildlife Conservation Board of the California Department of Fish and Game (DFG) has submitted a grant request for federal money through the Coastal and Estuarine Land Conservation Program (CELCP) administered by the National Oceanic and Atmospheric Administration (NOAA). The grant funds will be used to acquire two privately held parcels, one of 20.0 acres and the second of 3.89 acres, that are directly adjacent to the existing Elkhorn Slough Ecological Reserve. The Wildlife Conservation Board is acting for the lead Federal agency (NOAA) for the purposes of Section 106 consultation regarding this undertaking and is seeking my comments on the effects that the proposed project will have on historic properties.

These lands are being acquired for the purposes of preserving the ecological values found on the properties and for use as open space and as buffer areas between development and the waters of the slough. DFG administers the Elkhorn Slough Ecological Reserve and will include the subject properties under their overall estuarine management of the reserve. There will be no change in the current land use and no restoration activities are proposed. In addition to your letter of November 30, 2006, you have submitted the following document in support of this undertaking:

- *Record Search Results for the Proposed Elkhorn Ecological Reserve Expansions, Including the Howell Property and the Wells Property, Monterey County, California* (Northwest Information Center: November 13, 2006).

After reviewing your letter and the records search from the Northwest Information Center, I have the following comments:

1) The records search submitted for this undertaking indicates that one previously recorded archeological site, CA-MNT-1182, is located within the subject land (Wells Property) and that the project parcels have not been subject to an intensive cultural resources survey.

2) As this undertaking is a land acquisition project only, and the subject parcels are being acquired by the Wildlife Conservation Board of the DFG in order to prevent their development and maintain a buffer area around the Elkhorn Slough Ecological Reserve, and the DFG plans to maintain these parcels as open space dedicated to the preservation of ecological values, I have no objection to your finding of No Historic Properties Affected.

3) Although the Wildlife Conservation Board has no plans to develop these properties, I recommend that the DFG have these two parcels surveyed by a professional archeologist and additionally have the site record and other information on CA-MNT-1182 updated on DPR 523 forms. This data will assist DFG personnel in future management of CA-MNT-1182 and any other extant historic properties that may be located on the Wells and Howell parcels.

Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 or email wsoule@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

IPaC **U.S. Fish & Wildlife Service**

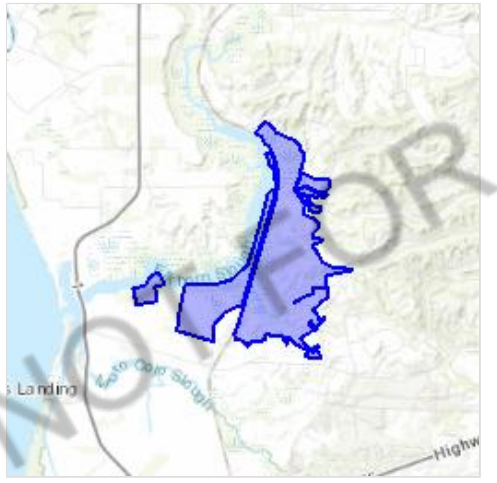
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California



Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Southern Sea Otter Enhydra lutris nereis — Threatened
Marine mammal
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8560

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

California Least Tern Sterna antillarum browni — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Marbled Murrelet Brachyramphus marmoratus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/4467

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8035

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Menzies' Wallflower Erysimum menziesii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2935	Endangered
Monterey Gilia Gilia tenuiflora ssp. arenaria No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/856	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened

Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
California Red-legged Frog Rana draytonii https://ecos.fws.gov/ecp/species/2891#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below.

This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Oystercatcher Haematopus bachmani This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Gull-billed Tern Gelochelidon nilotica — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9501

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Mountain Plover Charadrius montanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3638

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

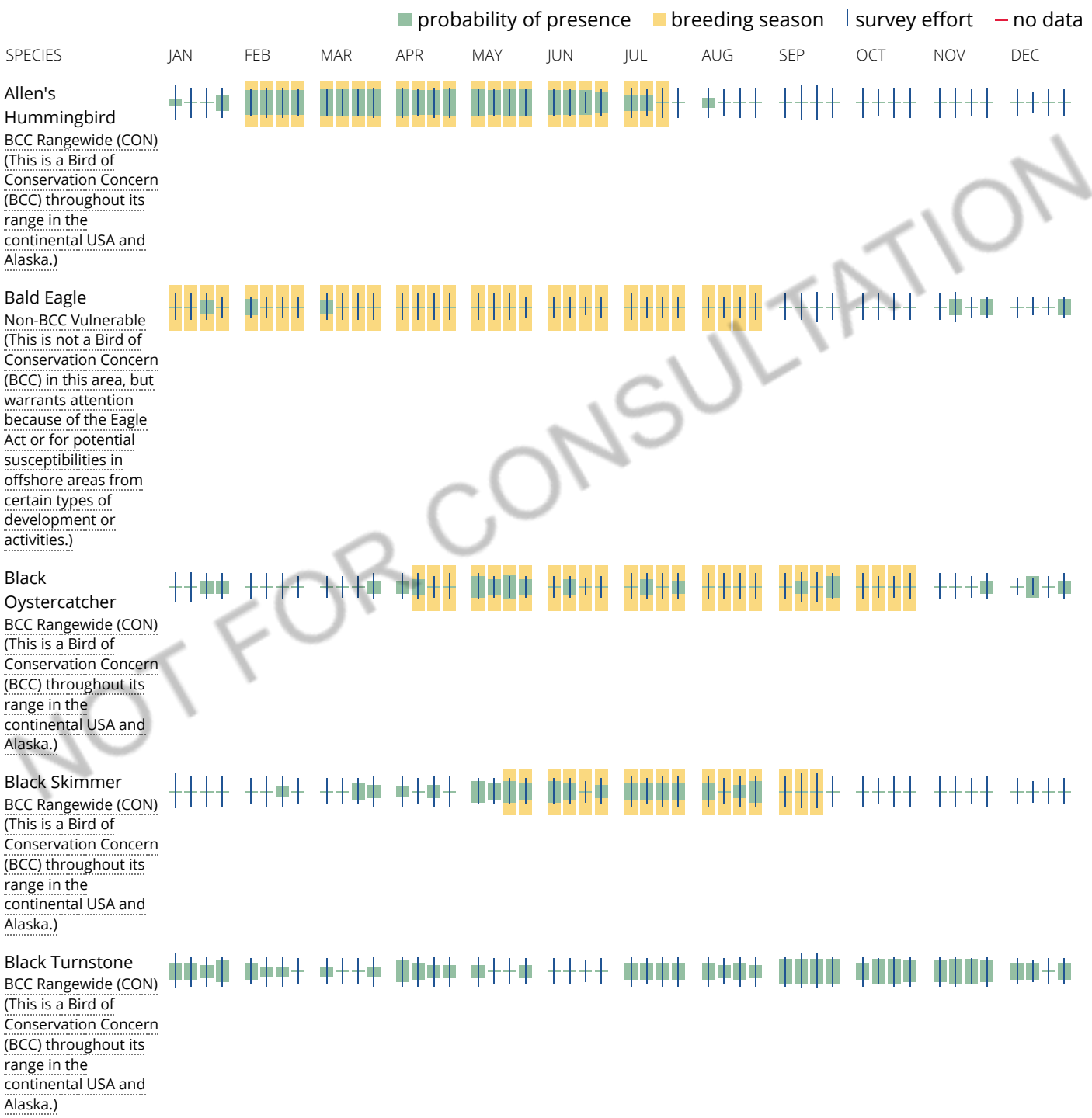
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Burrowing Owl
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

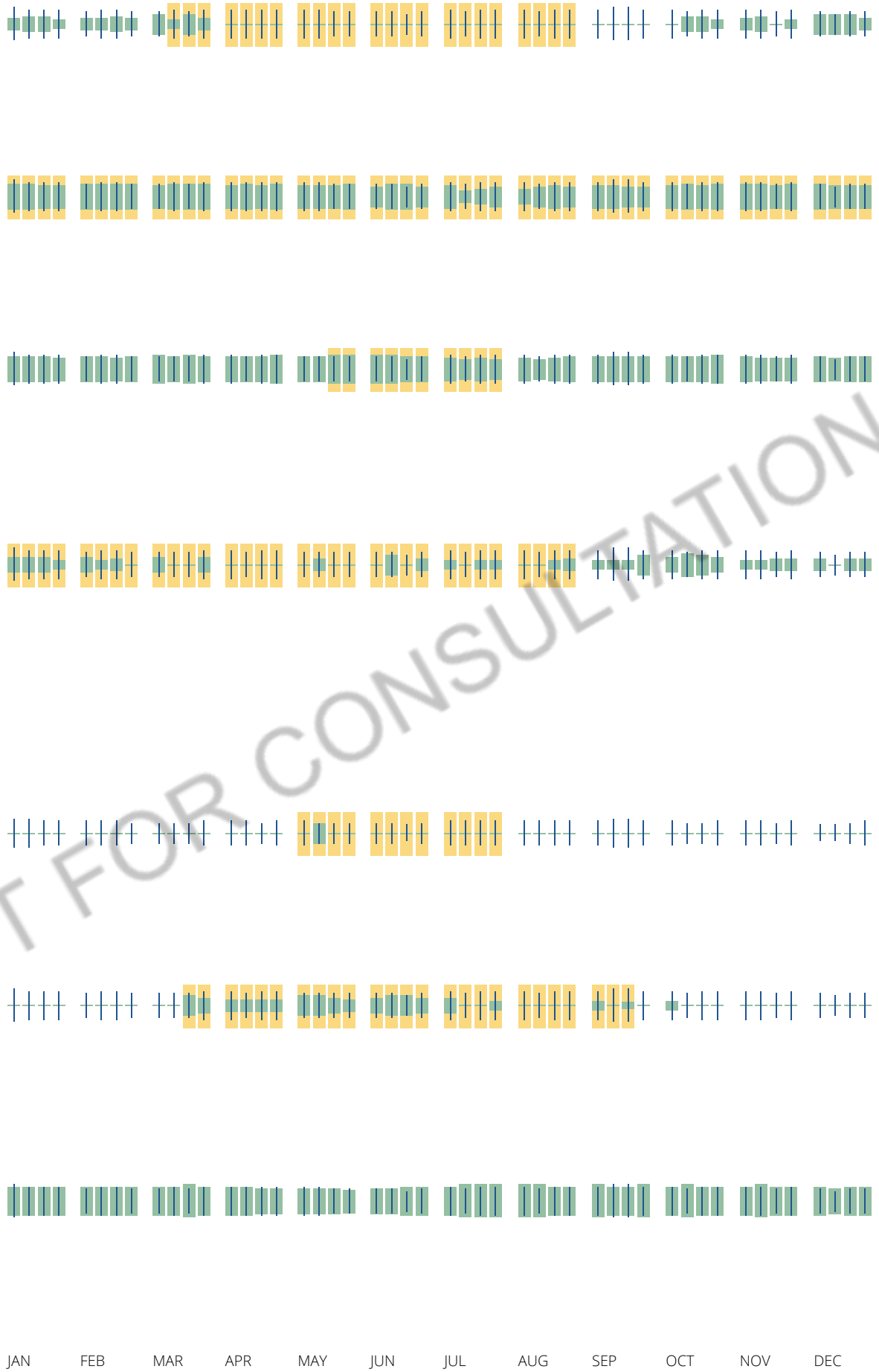
Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Gull-billed Tern
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Mountain Plover
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter Enhydra lutris nereis
https://ecos.fws.gov/ecp/species/8560

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

- E1UBL
- E1UBLx

ESTUARINE AND MARINE WETLAND

- E2USN
- E2EM1N
- E2EM1P
- E2USNx
- E2EM1Nx

FRESHWATER EMERGENT WETLAND

- PEM1C
- PEM1Ch
- PEM1Ah
- PEM1Cf
- PEM1Fh
- PEM1B
- PEM1/SSA
- PEM1/SSCh
- PEM1A
- PEM1/SSC
- PEM1Cx
- PEM1Ax

FRESHWATER FORESTED/SHRUB WETLAND

- PSSA
- PFOC
- PSSCh
- PSSC
- PFOA

FRESHWATER POND

- PUBHh

PAB/EM1Fh
PUB/ABHh
PUBHx
PABFh
PUBFh
PUBKx

RIVERINE

R4SBA
R4SBC
R4SBAx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/498

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

MIGRATORY BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

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Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

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What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters.

Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/498

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
California Red-legged Frog Rana draytonii https://ecos.fws.gov/ecp/species/2891#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

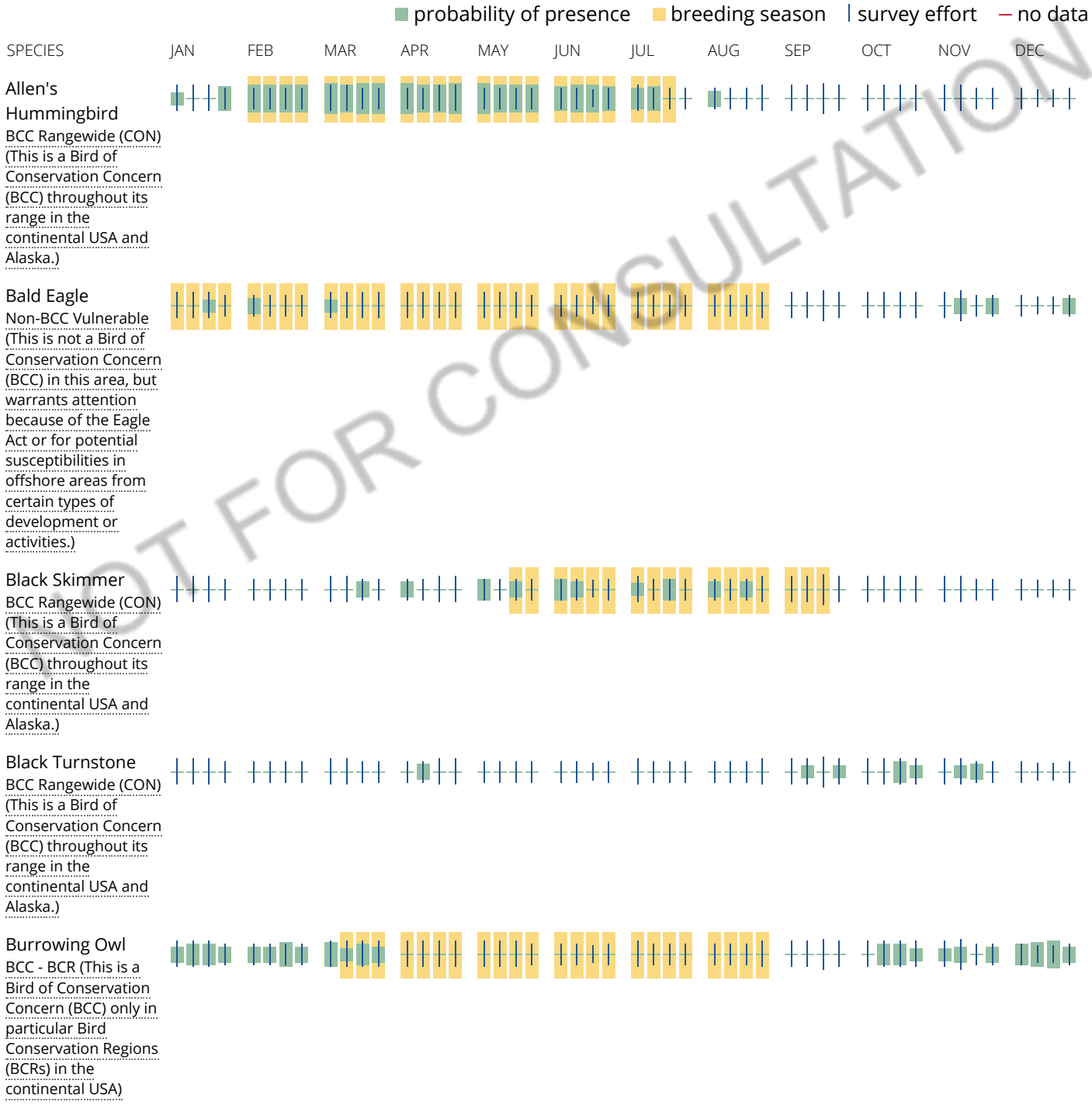
Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

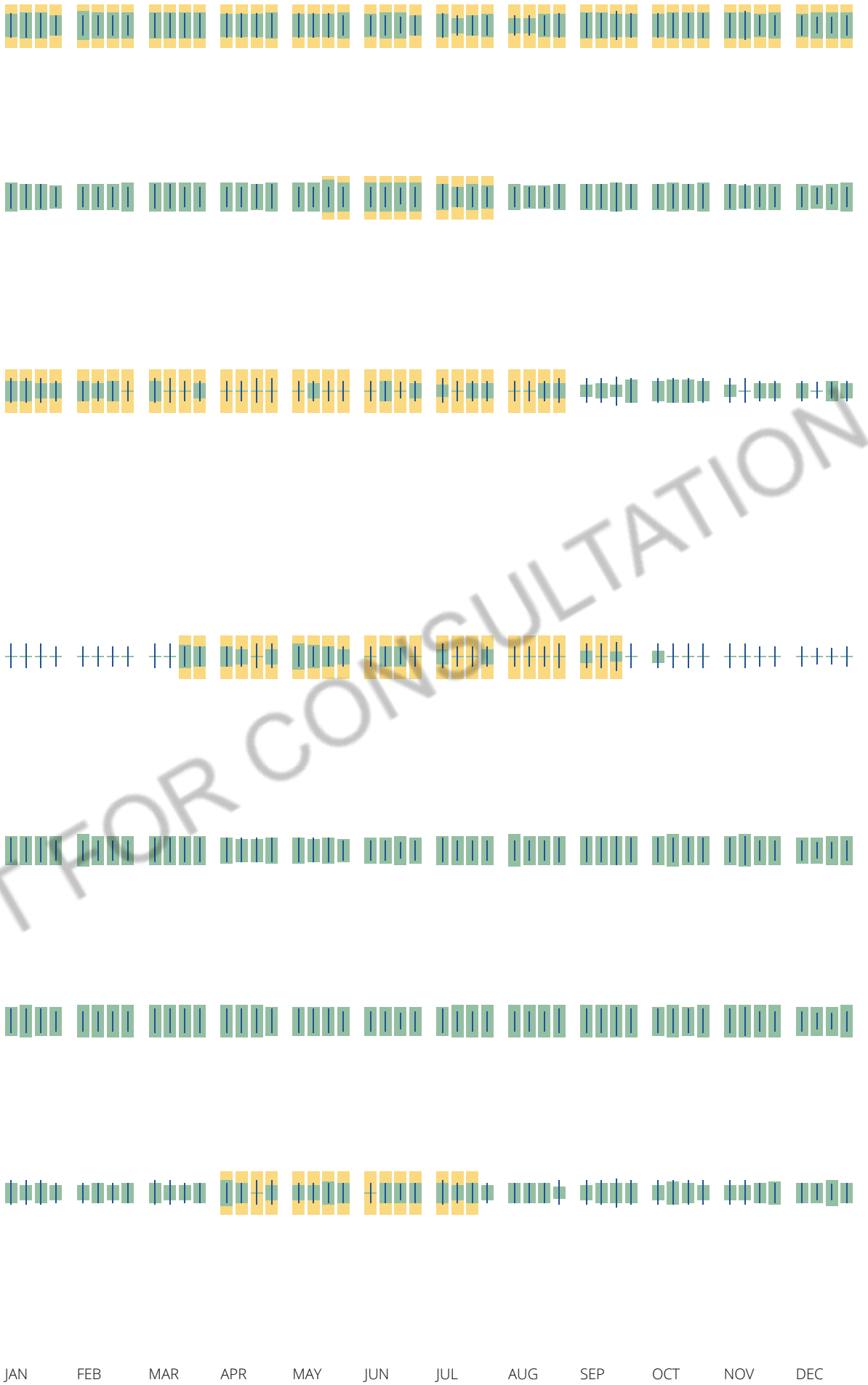
Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

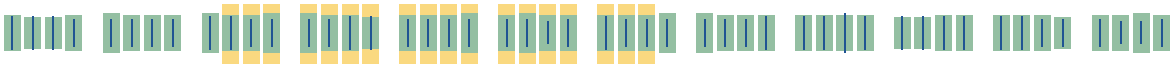
Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



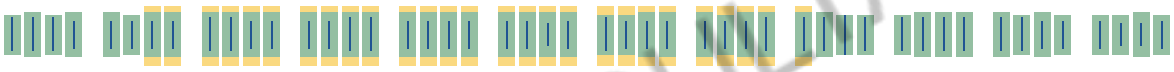
Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



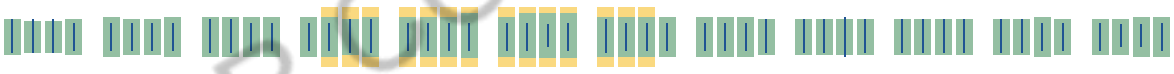
Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

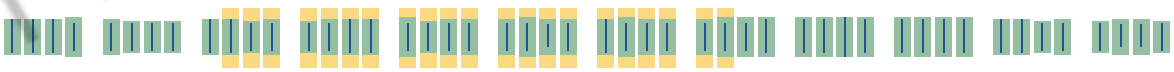
Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



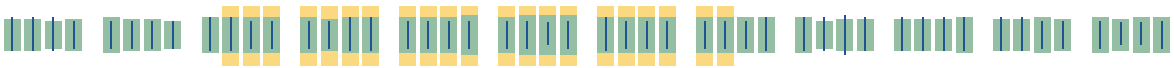
Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



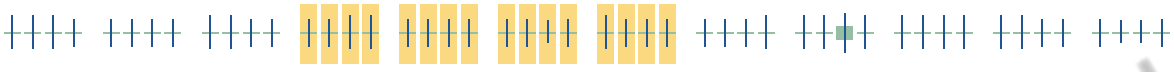
Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters.

Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/498

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
California Red-legged Frog Rana draytonii https://ecos.fws.gov/ecp/species/2891#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

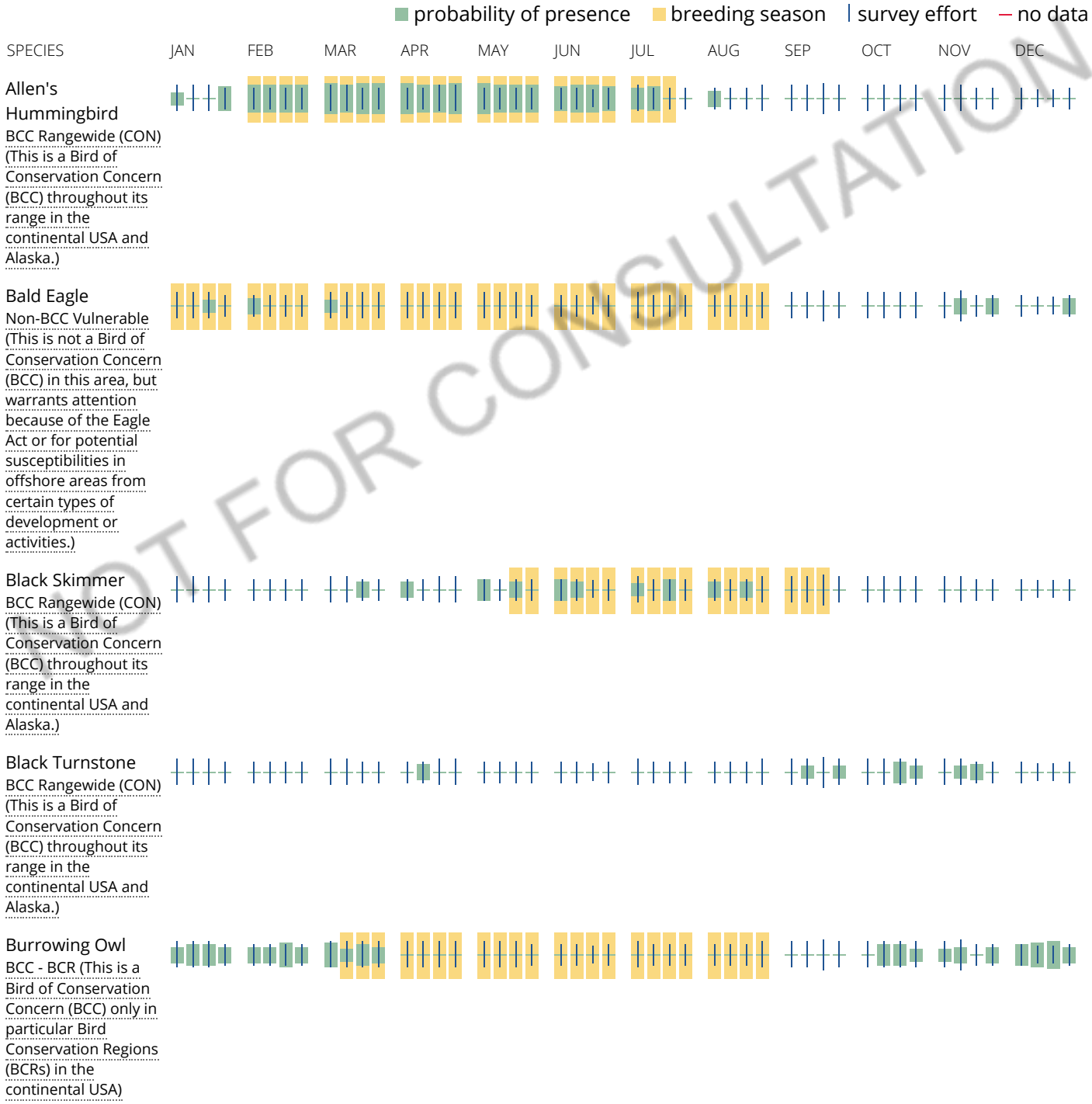
Survey Effort (|)

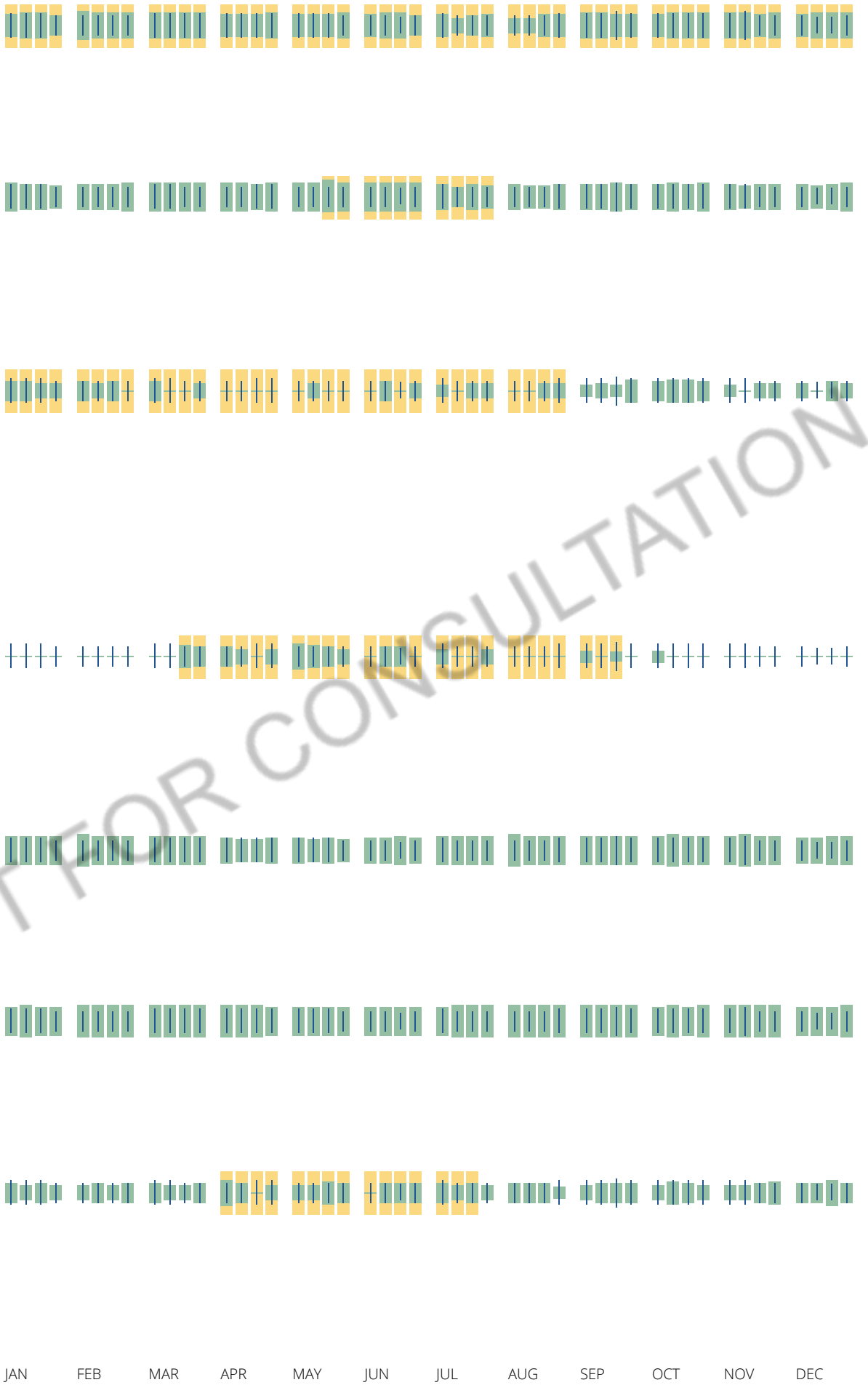
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

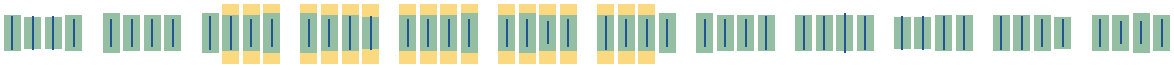
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





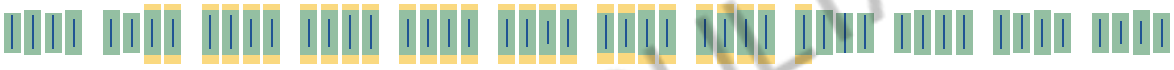
Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



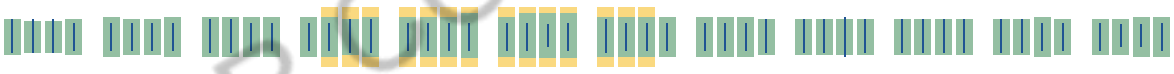
Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

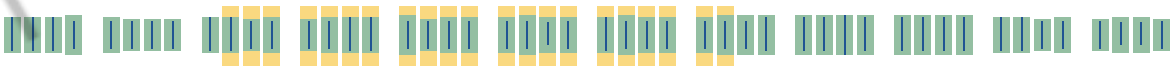
Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



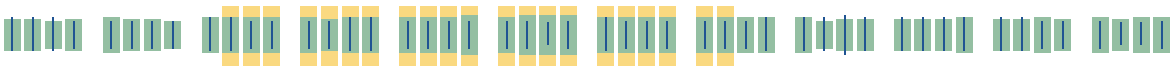
Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



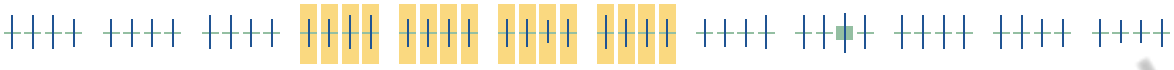
Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1/SSCh

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

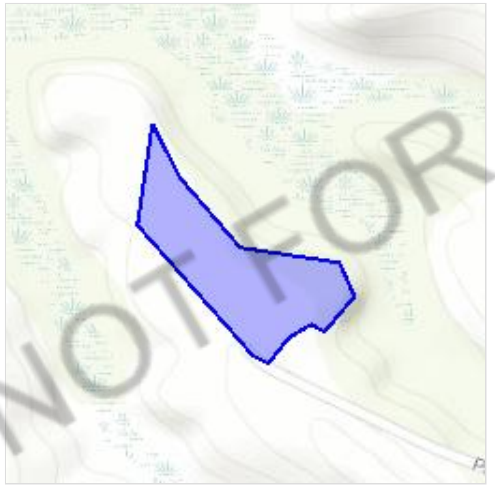
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California



Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Southern Sea Otter Enhydra lutris nereis — Threatened
Marine mammal
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8560

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

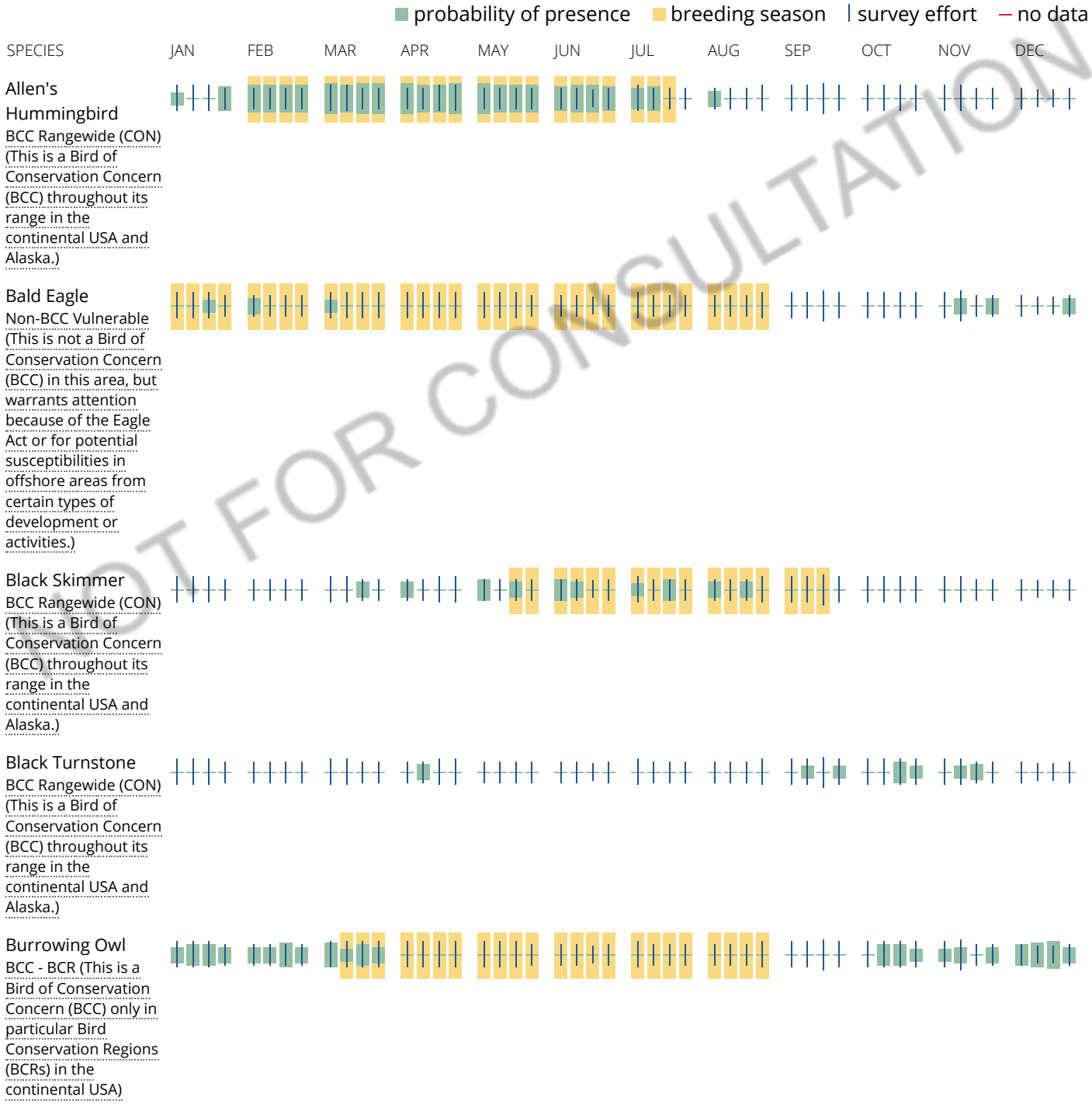
Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

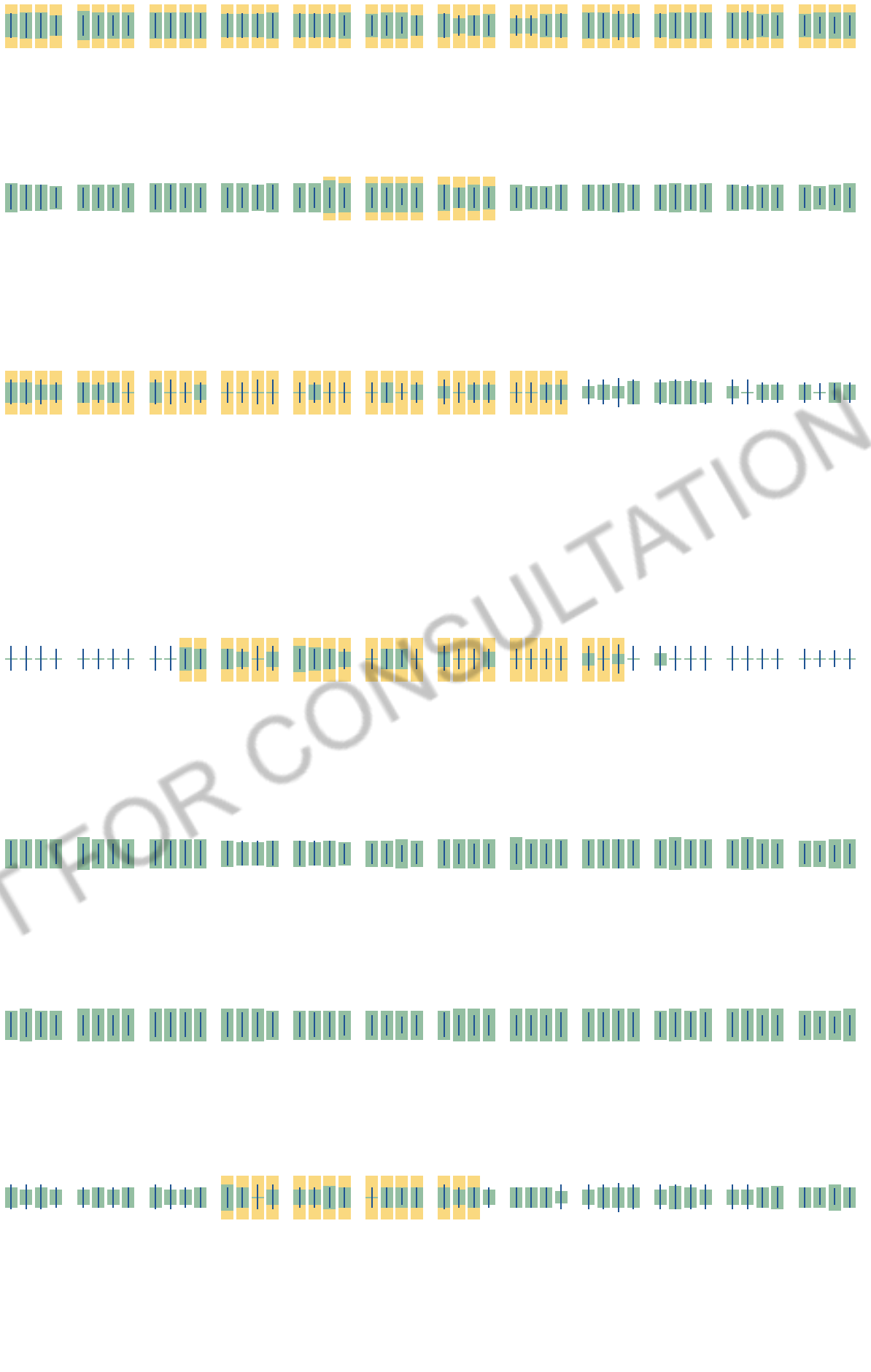
Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

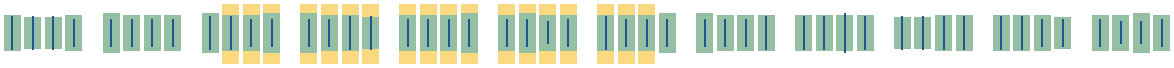
Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



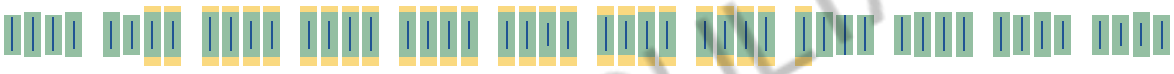
Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



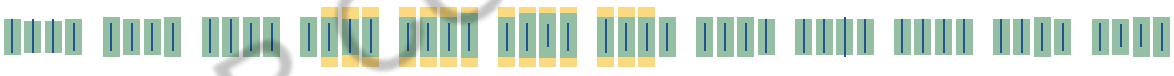
Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

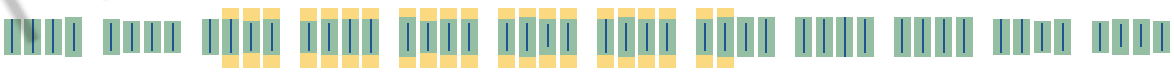
Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



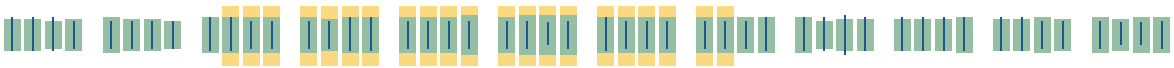
Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



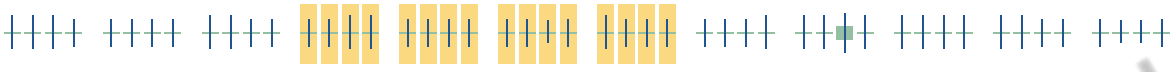
Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter Enhydra lutris nereis
https://ecos.fws.gov/ecp/species/8560

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

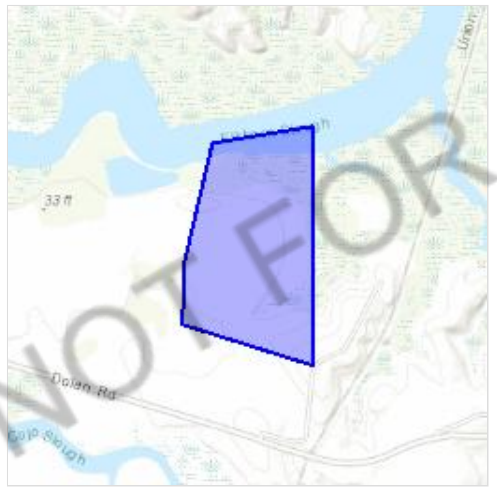
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California



Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Southern Sea Otter Enhydra lutris nereis — Threatened
Marine mammal
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8560

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Least Tern Sterna antillarum browni — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Marbled Murrelet Brachyramphus marmoratus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/4467

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8035

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Menzies' Wallflower Erysimum menziesii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2935	Endangered
Monterey Gilia Gilia tenuiflora ssp. arenaria No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/856	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened

Santa Cruz Tarplant Holocarpha macradenia — Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6832

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black Turnstone Arenaria melanocephala This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

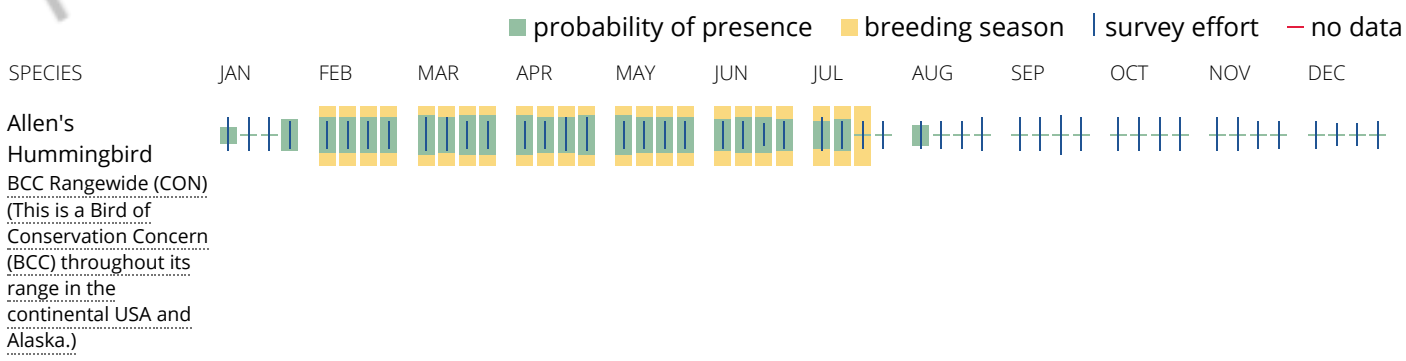
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

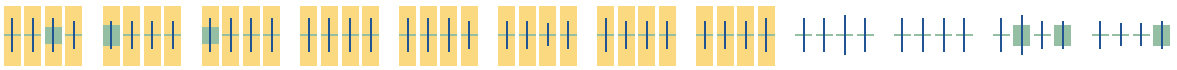
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

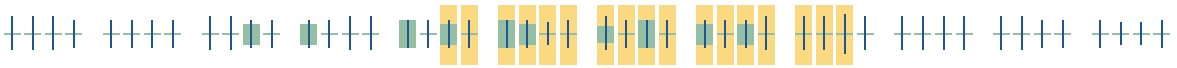
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Black Skimmer
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



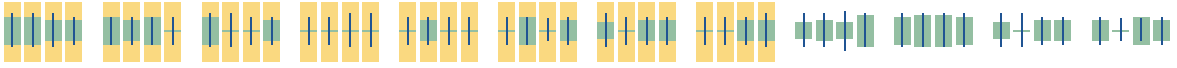
Black Turnstone
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Burrowing Owl
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

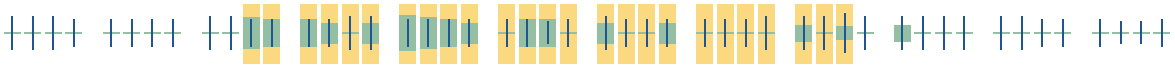
Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur

and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter Enhydra lutris nereis
https://ecos.fws.gov/ecp/species/8560

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

- E1UBL

ESTUARINE AND MARINE WETLAND

- E2USN
- E2EM1N
- E2EM1P
- E2USNx

FRESHWATER EMERGENT WETLAND

- PEM1Cf
- PEM1Ch

FRESHWATER FORESTED/SHRUB WETLAND

- PSSCh

FRESHWATER POND

- PUBHh
- PUBHx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Southern Sea Otter Enhydra lutris nereis — Threatened
No critical habitat has been designated for this species. — Marine mammal
https://ecos.fws.gov/ecp/species/8560

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Least Tern Sterna antillarum browni — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Marbled Murrelet Brachyramphus marmoratus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/4467

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8035

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7405	Endangered

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Menzies' Wallflower Erysimum menziesii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2935	Endangered
Monterey Gilia Gilia tenuiflora ssp. arenaria No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/856	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED

FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Oystercatcher Haematopus bachmani This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black Turnstone Arenaria melanocephala This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Gull-billed Tern Gelochelidon nilotica — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9501

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Mountain Plover Charadrius montanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3638

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Song Sparrow Melospiza melodia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee Pipilo maculatus clementae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Whimbrel Numenius phaeopus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ

"Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

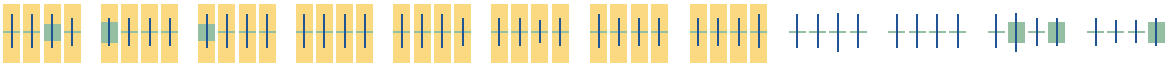
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort – no data

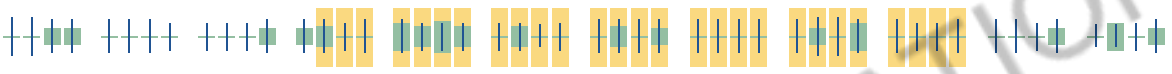
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Allen's Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

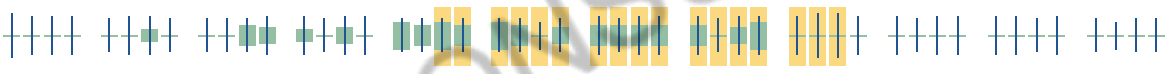
Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Black Oystercatcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

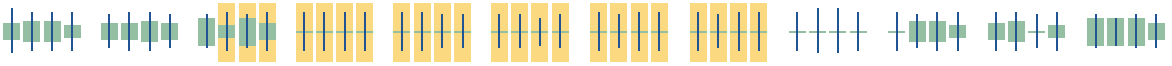


Black Skimmer
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

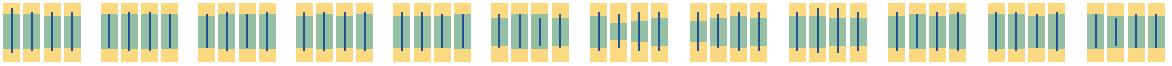


Black Turnstone
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Burrowing Owl
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



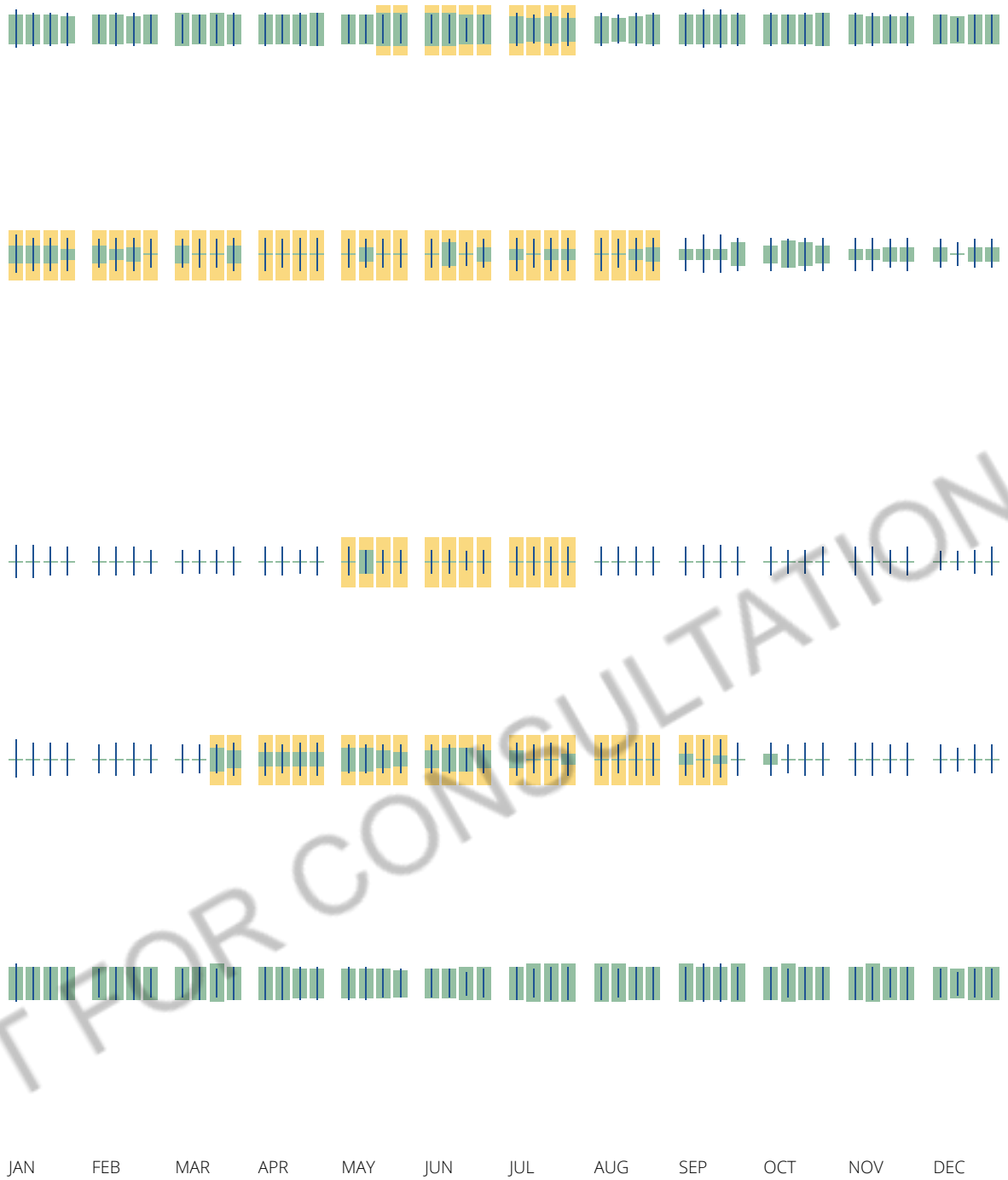
Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Gull-billed Tern
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

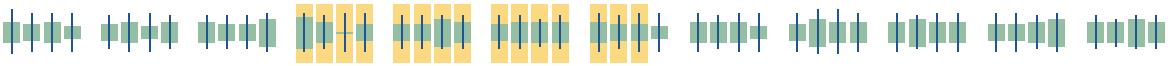
Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



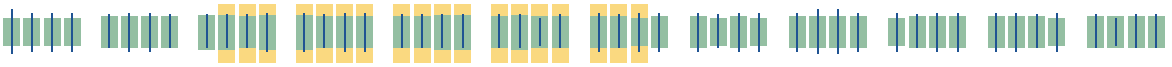
Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Mountain Plover
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

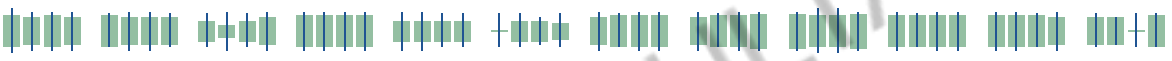


Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter Enhydra lutris nereis
https://ecos.fws.gov/ecp/species/8560

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

E1UBL

ESTUARINE AND MARINE WETLAND

E2USN
E2EM1N
E2USNx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

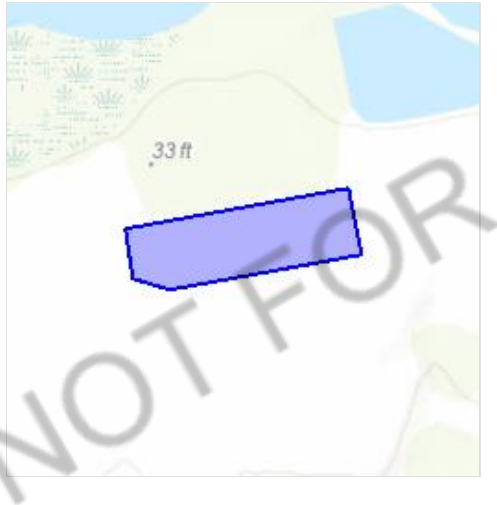
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California



Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Least Tern Sterna antillarum browni — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Marbled Murrelet Brachyramphus marmoratus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/4467

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8035

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Fishes

NAME	STATUS
Tidewater Goby Eucyclogobius newberryi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/57	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Menzies' Wallflower Erysimum menziesii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2935	Endangered
Monterey Gilia Gilia tenuiflora ssp. arenaria No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/856	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL

ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird Selasphorus sasin — Breeds Feb 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9637

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Oystercatcher Haematopus bachmani — Breeds Apr 15 to Oct 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9591

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Gull-billed Tern Gelochelidon nilotica — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9501

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Mountain Plover Charadrius montanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3638

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Song Sparrow Melospiza melodia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee Pipilo maculatus clementae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Whimbrel Numenius phaeopus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10
Yellow-billed Magpie Pica nuttalli This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

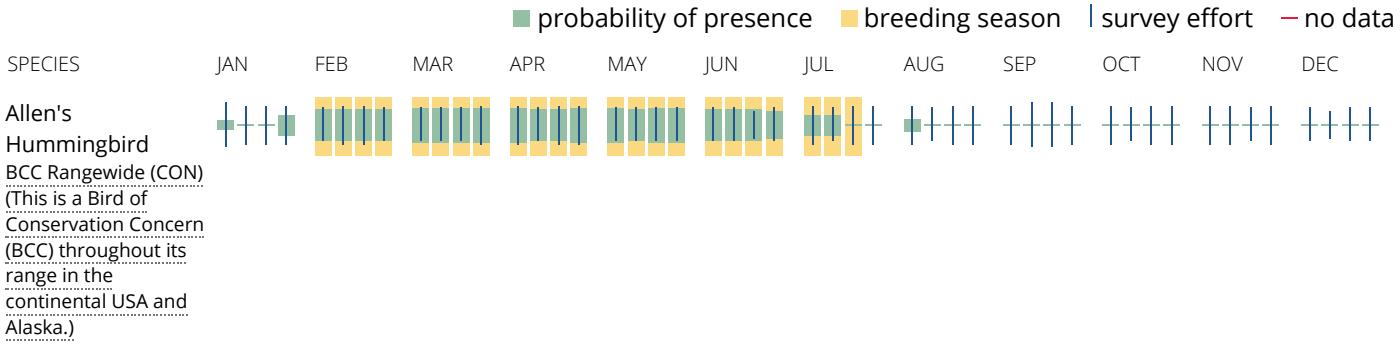
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

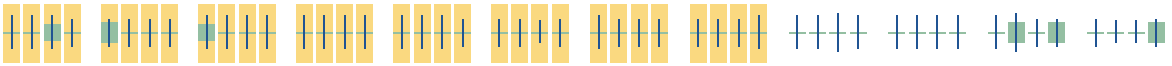
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

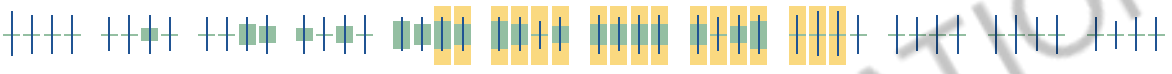


Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



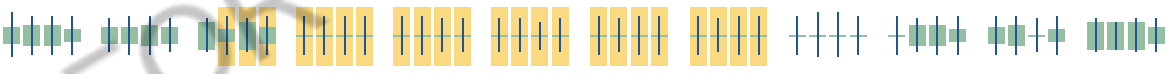
Black Oystercatcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Black Skimmer
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

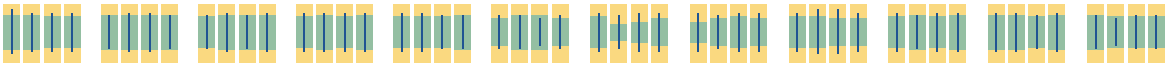


Black Turnstone
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Burrowing Owl
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Gull-billed Tern
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

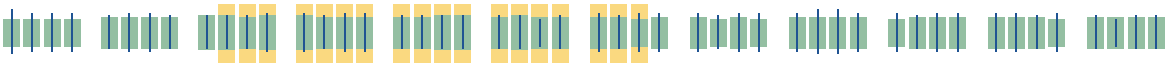
SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Mountain Plover
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



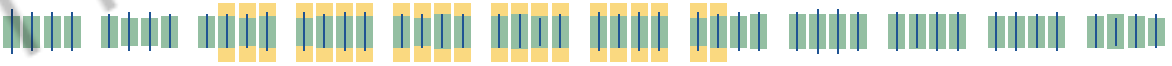
Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

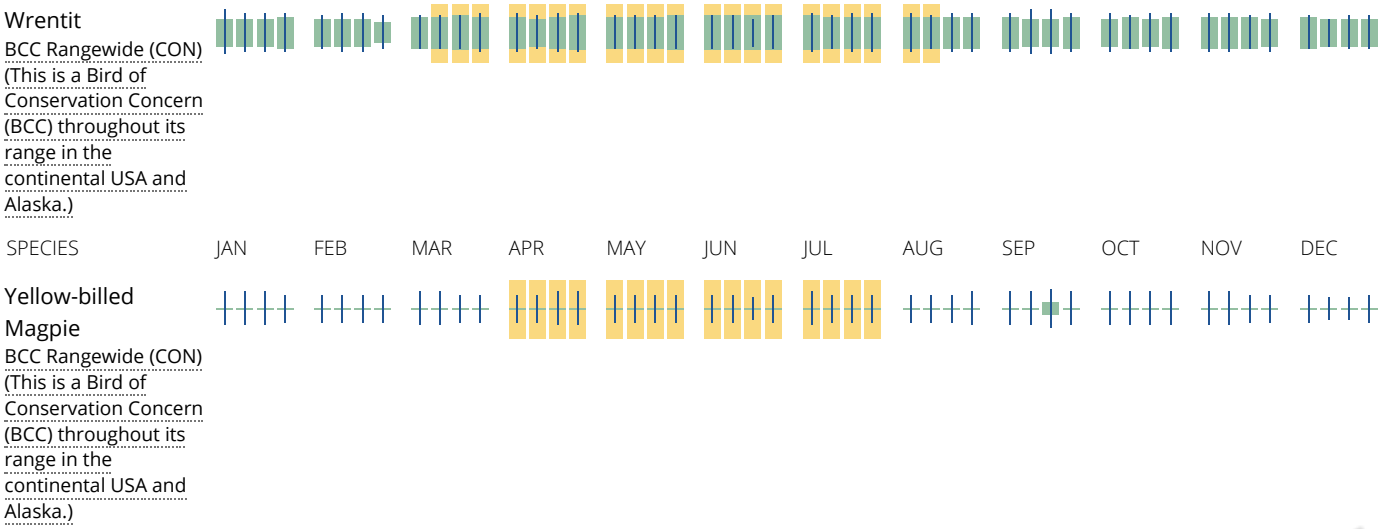
Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize

potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER POND

PUBFx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged

aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/498

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

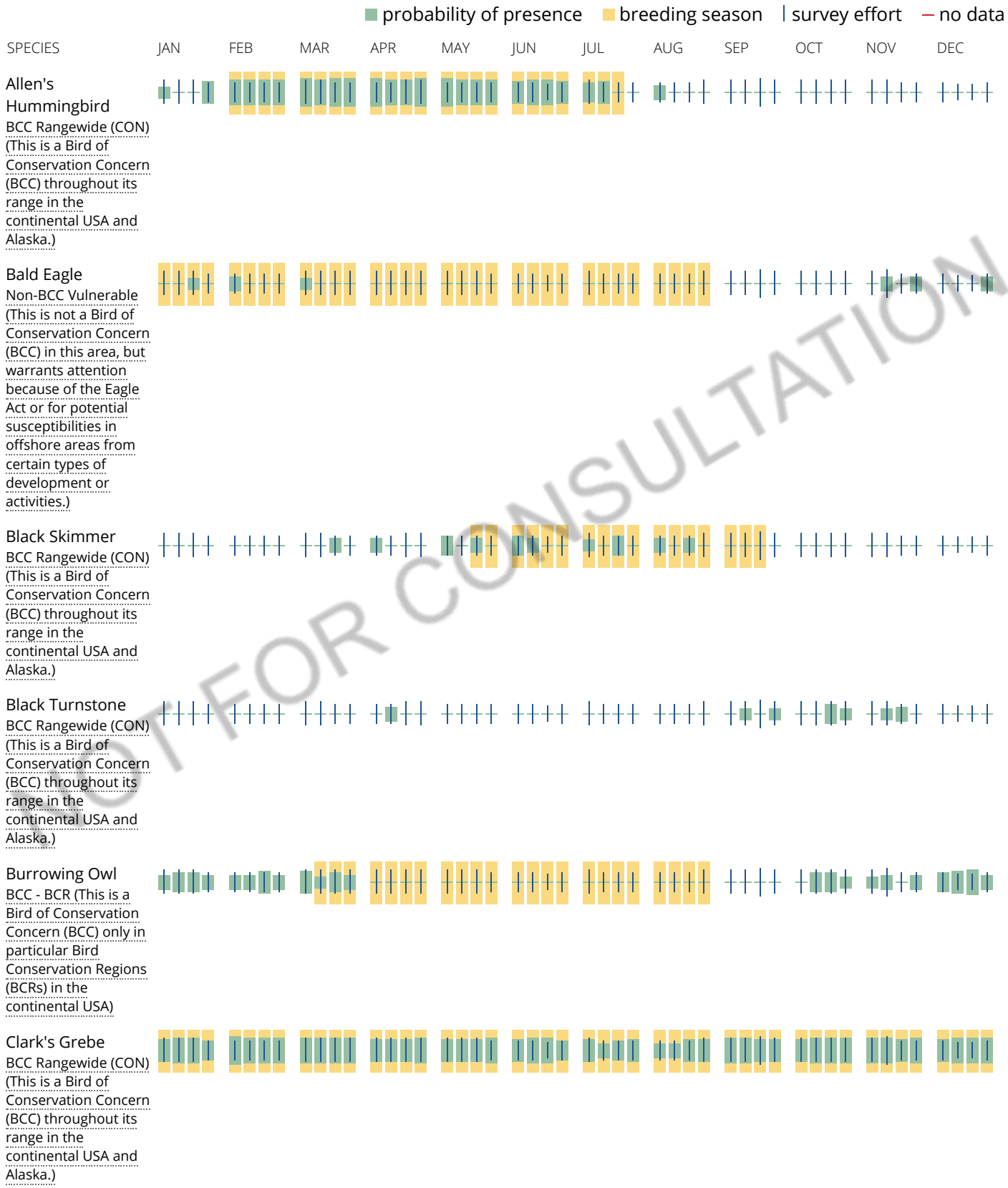
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

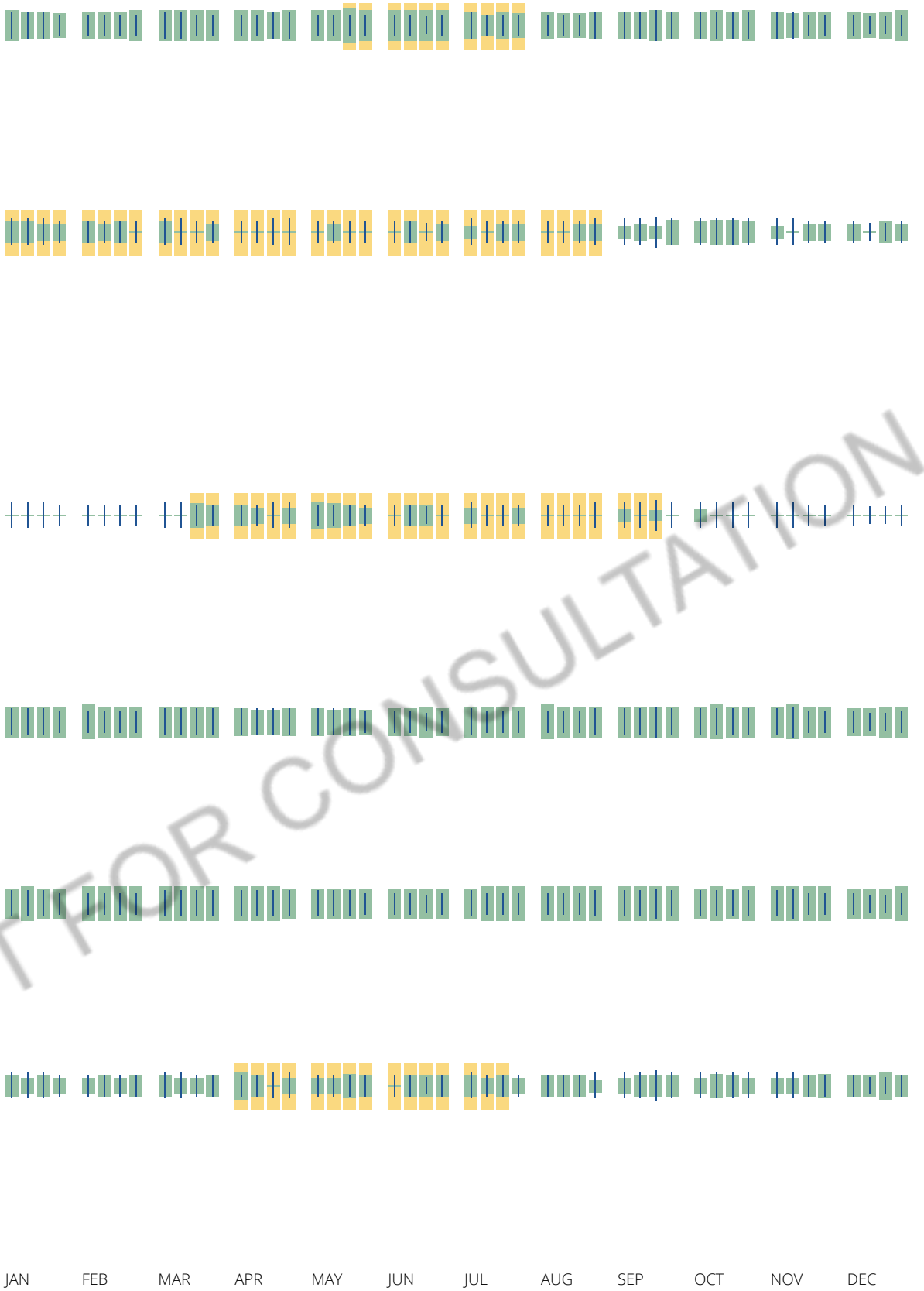
Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Marbled Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



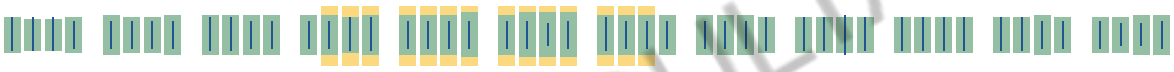
Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

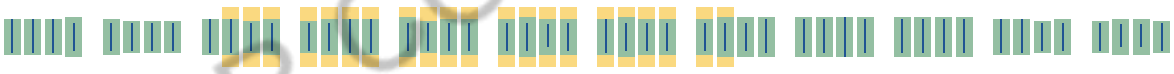
Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

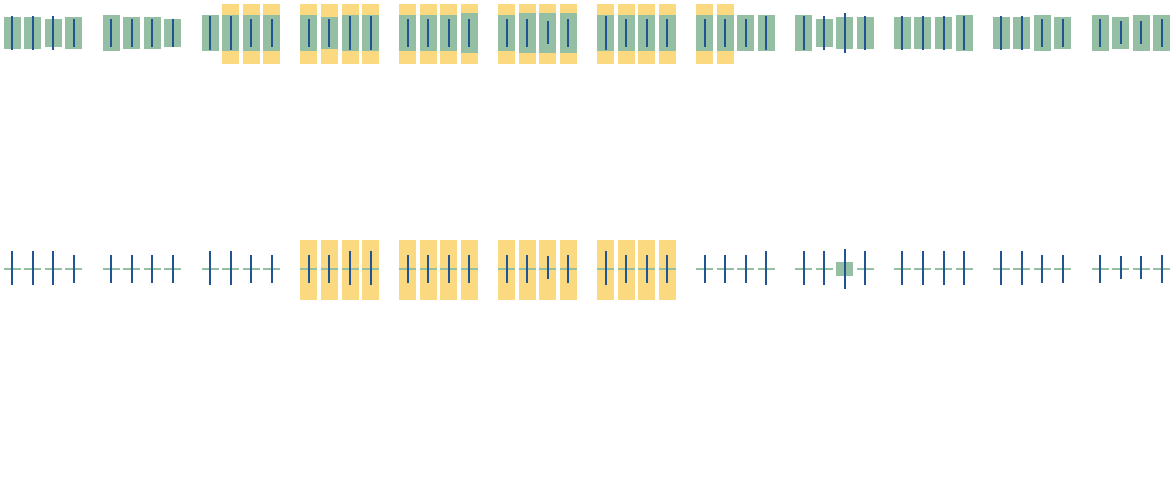


Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1Ax

FRESHWATER FORESTED/SHRUB WETLAND

PSSA

RIVERINE

R4SBAx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/498

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php

- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

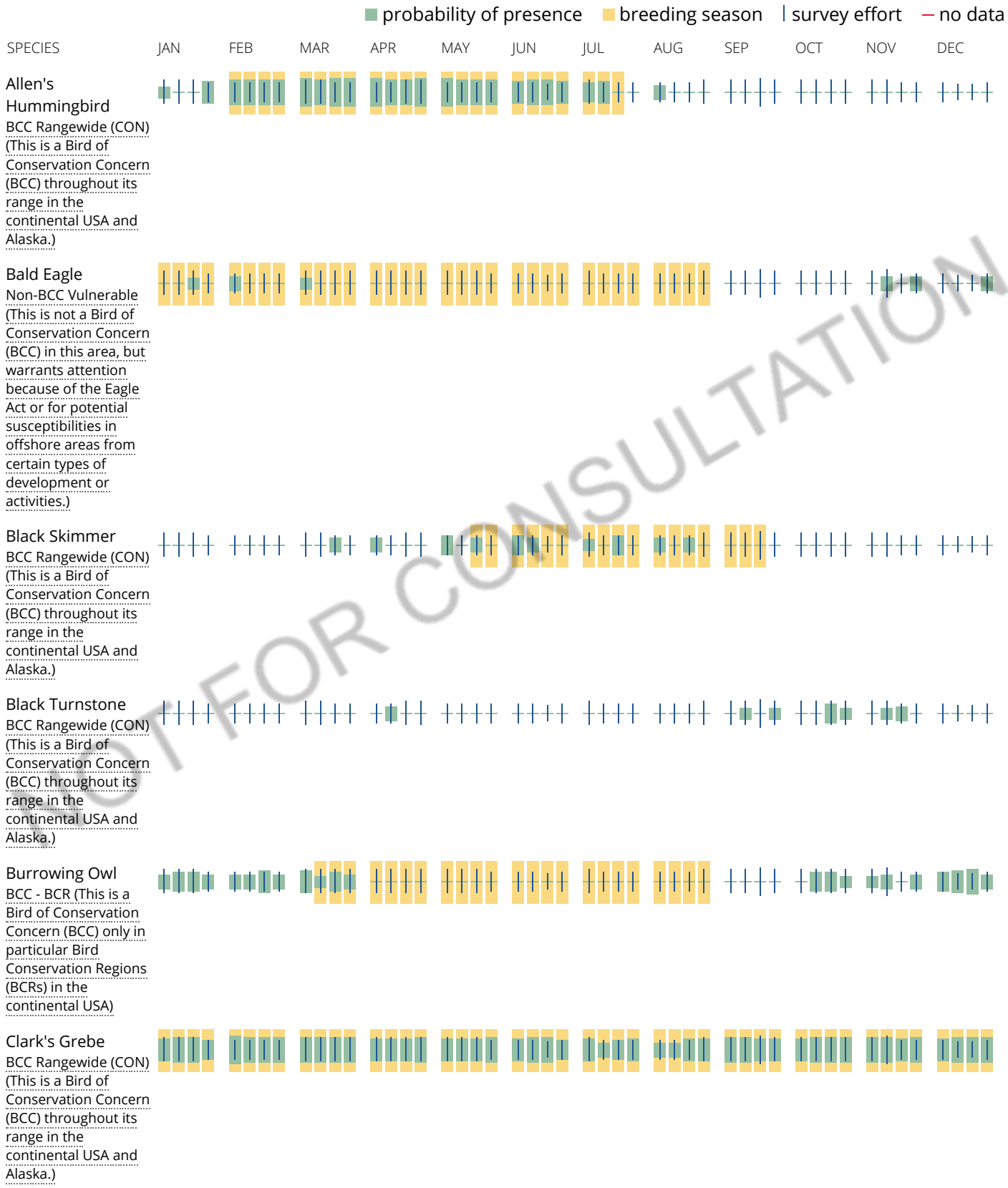
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

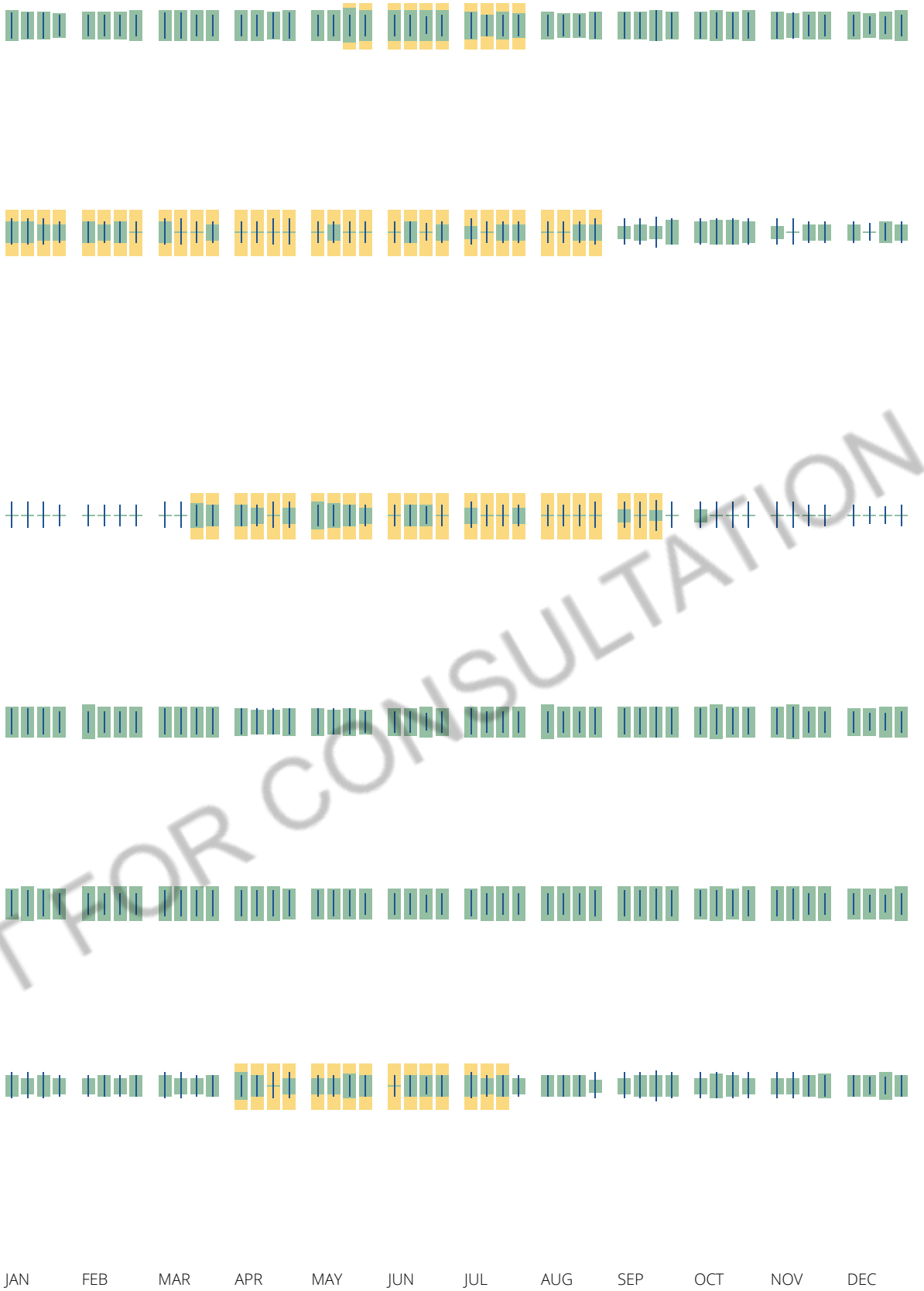
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



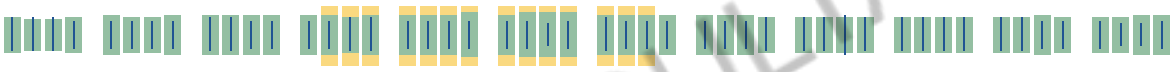


Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

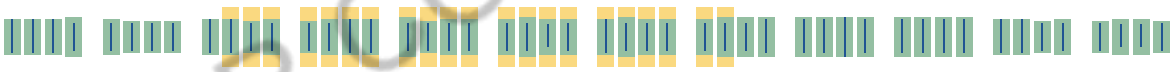
Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



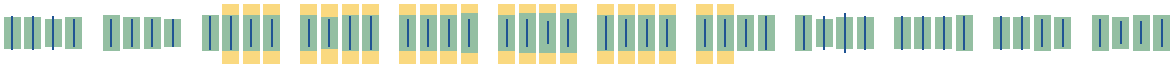
Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



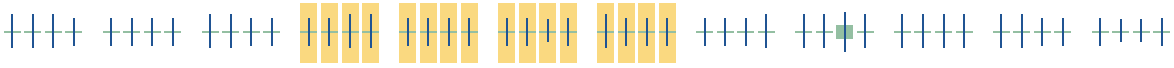
Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Monterey County, California

Local office

Ventura Fish And Wildlife Office

(805) 644-1766
(805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Southern Sea Otter Enhydra lutris nereis — Threatened
Marine mammal
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8560

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Condor Gymnogyps californianus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/8193

Least Bell's Vireo Vireo bellii pusillus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5945

Southwestern Willow Flycatcher Empidonax traillii extimus — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6749

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/2076

Santa Cruz Long-toed Salamander Ambystoma macrodactylum croceum — Endangered
There is **proposed** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7405

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered
Monterey Spineflower Chorizanthe pungens var. pungens There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/396	Threatened
Santa Cruz Tarplant Holocarpha macradenia There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6832	Threatened
Yadon's Piperia Piperia yadonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/4205	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
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https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
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Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
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https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

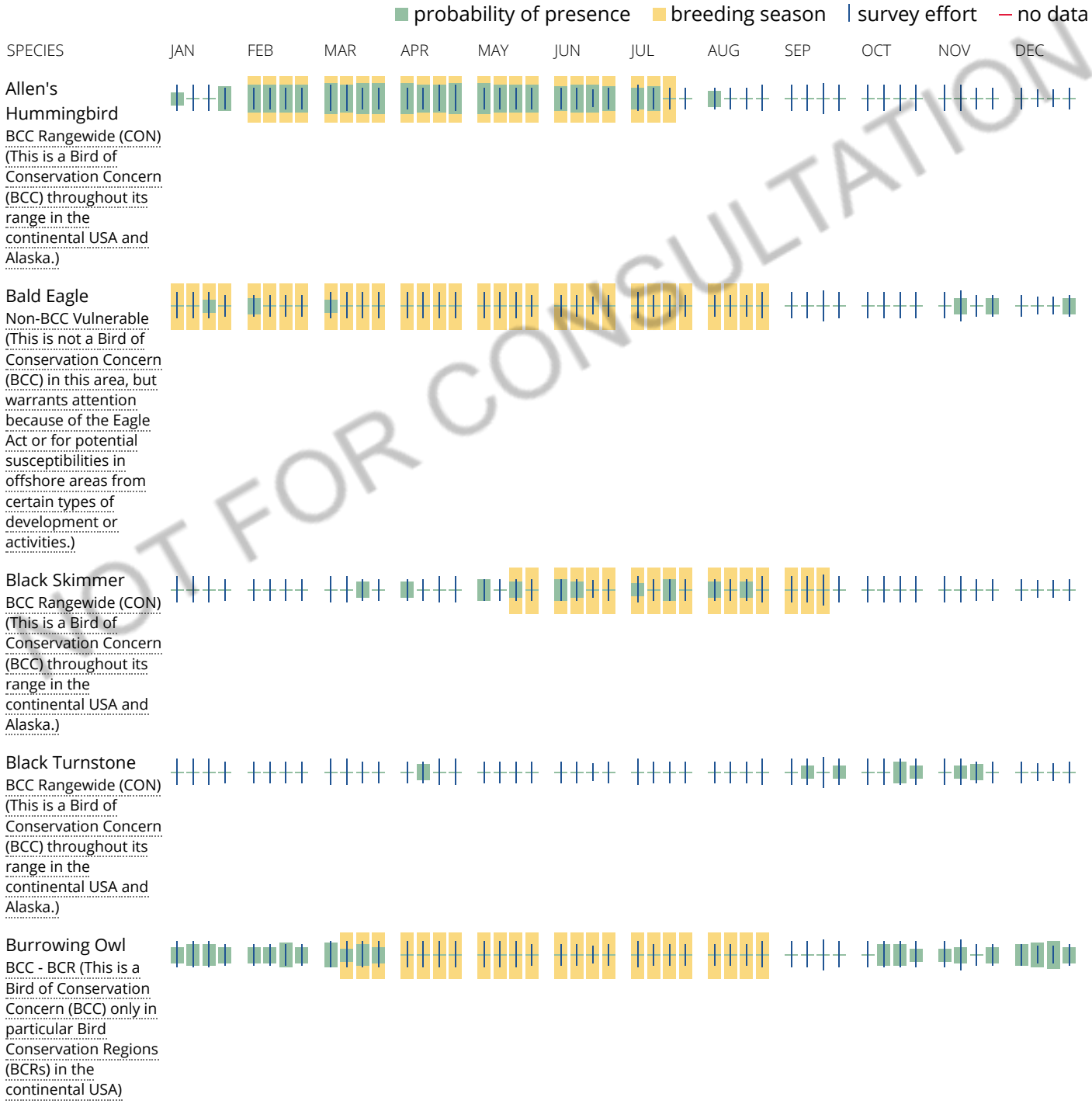
Survey Effort (|)

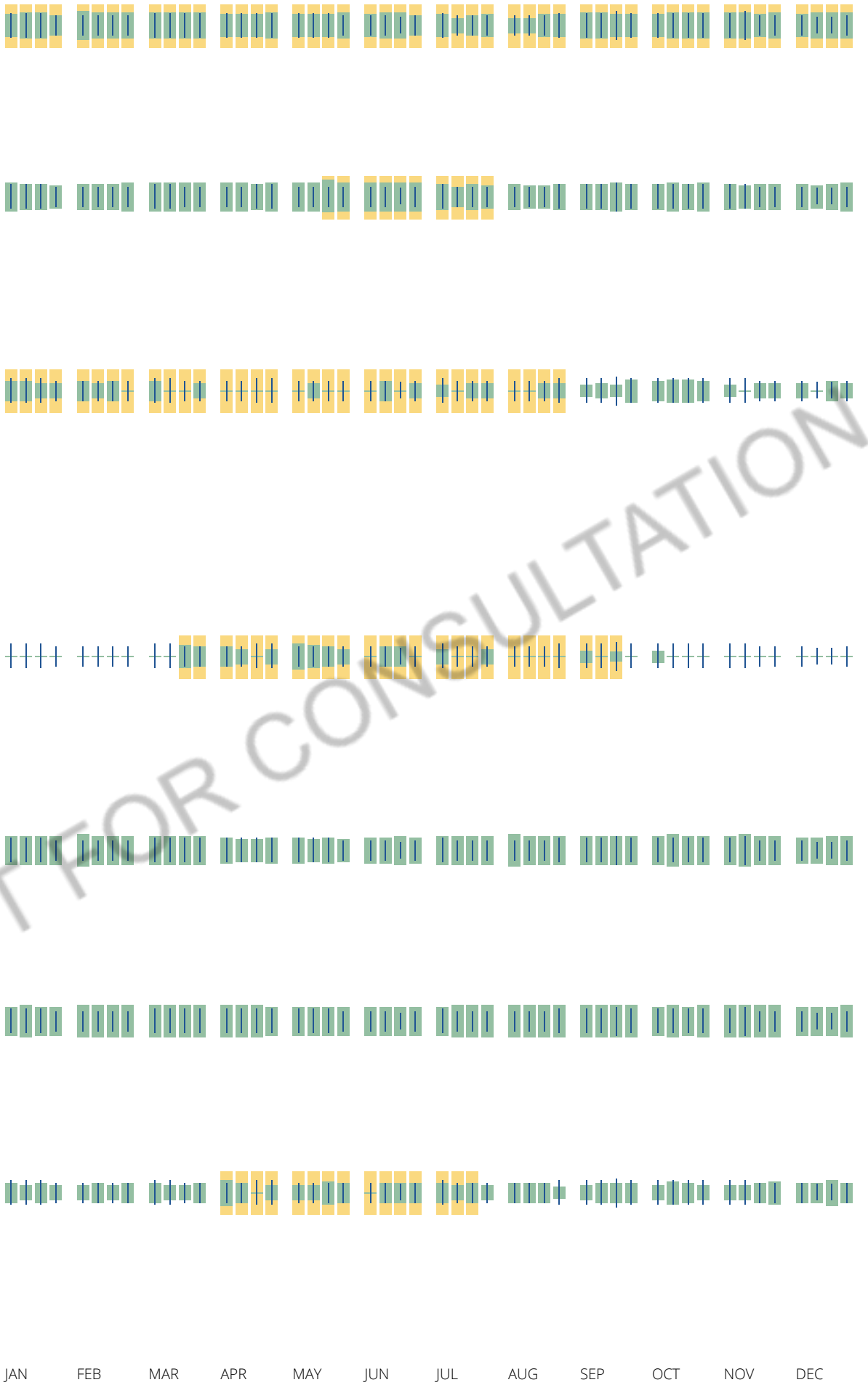
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

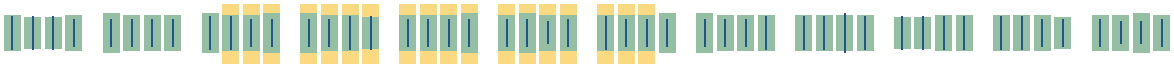
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





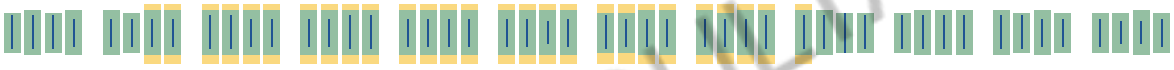
Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



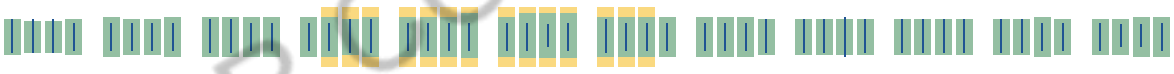
Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

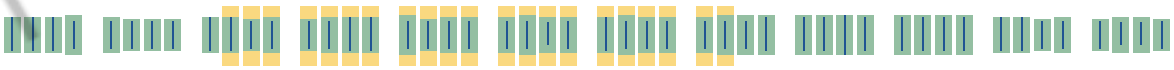
Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



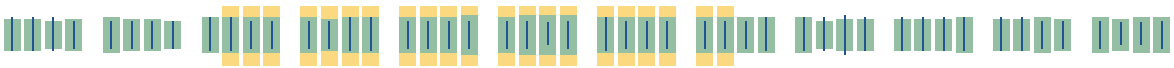
Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



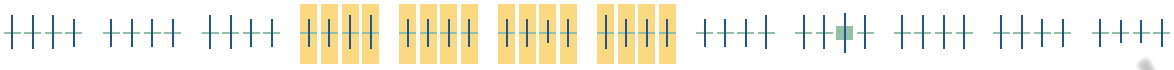
Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Marine mammals

Marine mammals are protected under the Marine Mammal Protection Act. Some are also protected under the Endangered Species Act[1] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora[2].

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries[3] [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the Marine Mammals page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The Endangered Species Act (ESA) of 1973.
2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

Southern Sea Otter Enhydra lutris nereis
https://ecos.fws.gov/ecp/species/8560

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904- 5200
FAX (415) 904-5400
TDD (415) 597-5885
WWW.COASTAL.CA.GOV

December 6, 2019

Elaine Vaudreuil
Program Specialist
NOAA
NOS, Office for Coastal Management
1305 East West Highway, SSMC4/10th Floor
Silver Spring, MD 20910

Subject: Negative Determination ND-0030-19 (Elkhorn Slough NERR 2019 Boundary Change, Monterey County, CA)

Dear Ms. Vaudreuil:

The Coastal Commission staff has reviewed the above-referenced negative determination. NOAA's Office for Coastal Management proposes to adjust the boundary of the Elkhorn Slough National Estuarine Research Reserve (NERR) by adding nine parcels to the existing management boundary of the Reserve and removing from the boundary a 13.98-acre portion of land that contains a non-conforming use (feedlot). The nine new parcels are owned by the State of California and all but one are adjacent to the Reserve's current boundary, and the land to be removed from the Reserve is no longer owned by the State. NOAA states that the proposed boundary change would provide a wider range of resource protection for wetland, aquatic, and upland habitats within the Reserve, improve integrated ecosystem management and habitat restoration, and enhance opportunities for research, monitoring, and education.

The Commission staff **agrees** with your conclusion that the proposed boundary change will benefit, and not adversely affect, coastal resources. We therefore **concur** with your negative determination made pursuant to 15 CFR §930.35 of the NOAA implementing regulations. Please contact Larry Simon at (415) 904-5288 should you have any questions regarding this matter.

Sincerely,

(for) JOHN AINSWORTH
Executive Director

cc: CCC – Central Coast District